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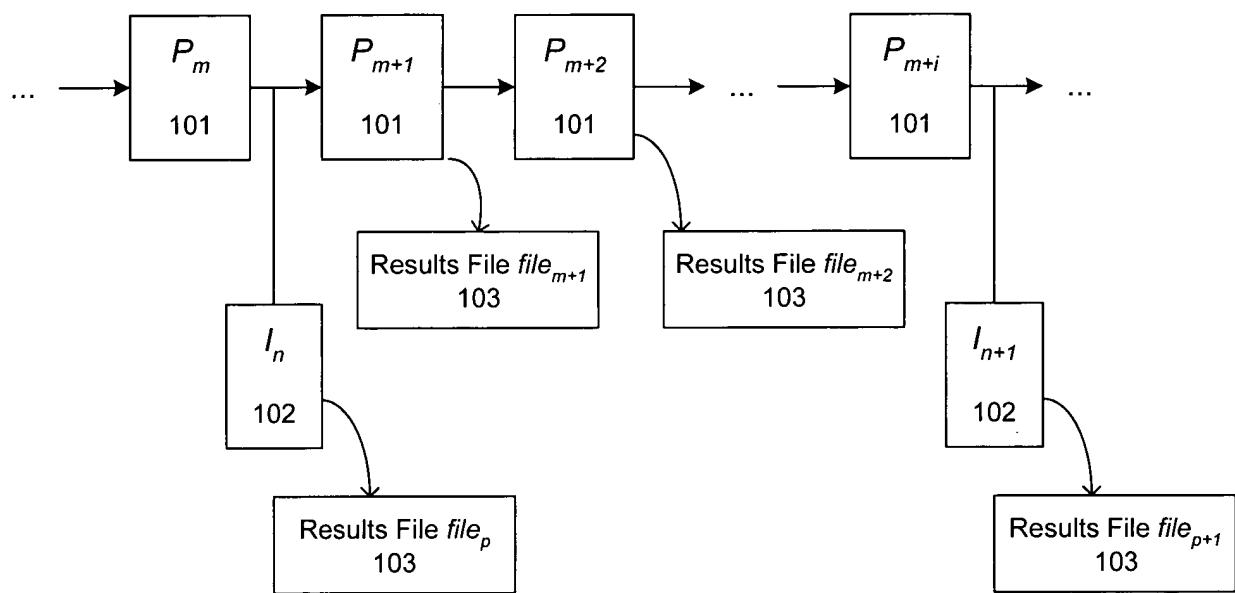


Figure 1

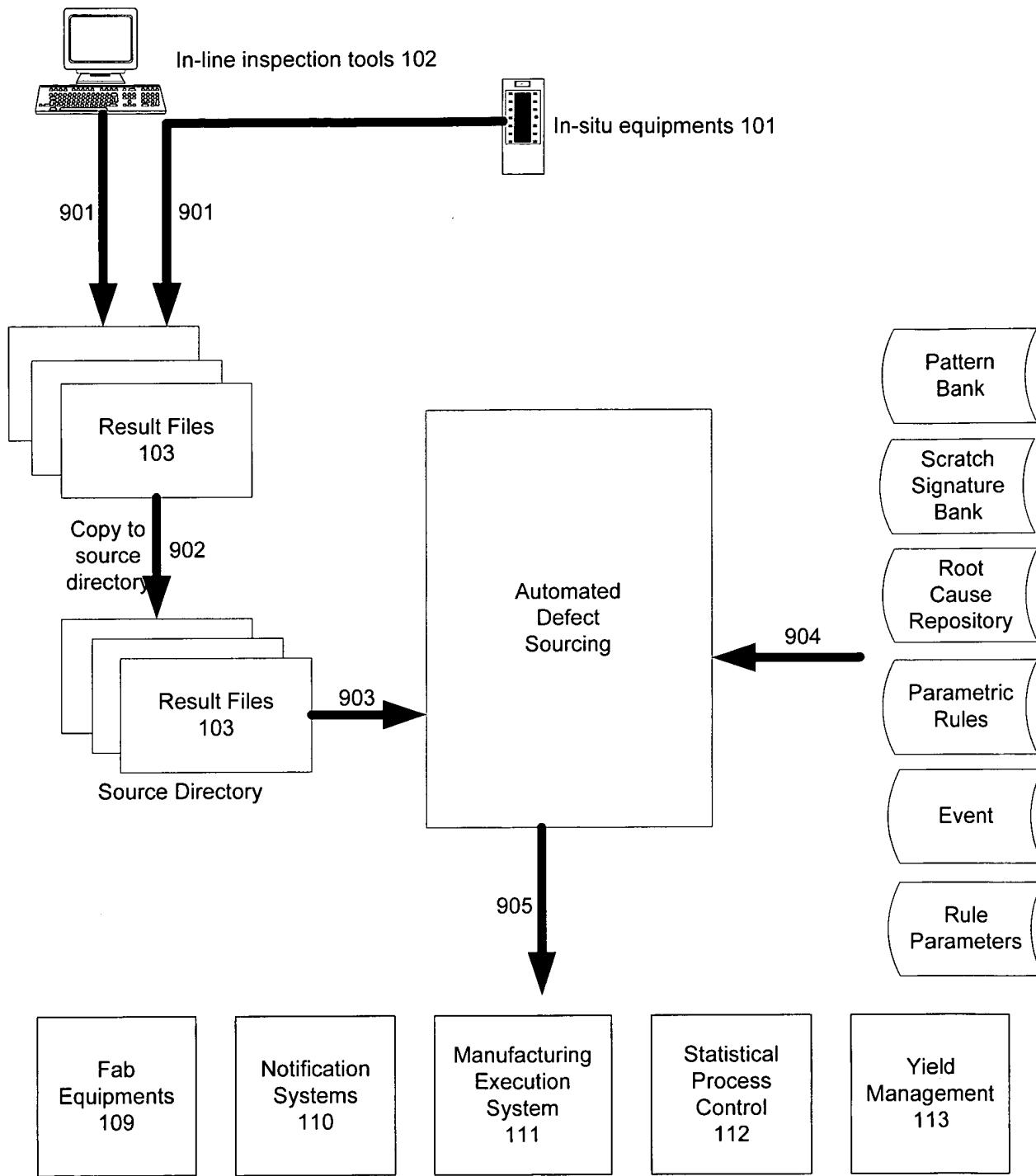


Figure 1a

**000
Automated Defect Sourcing Method**

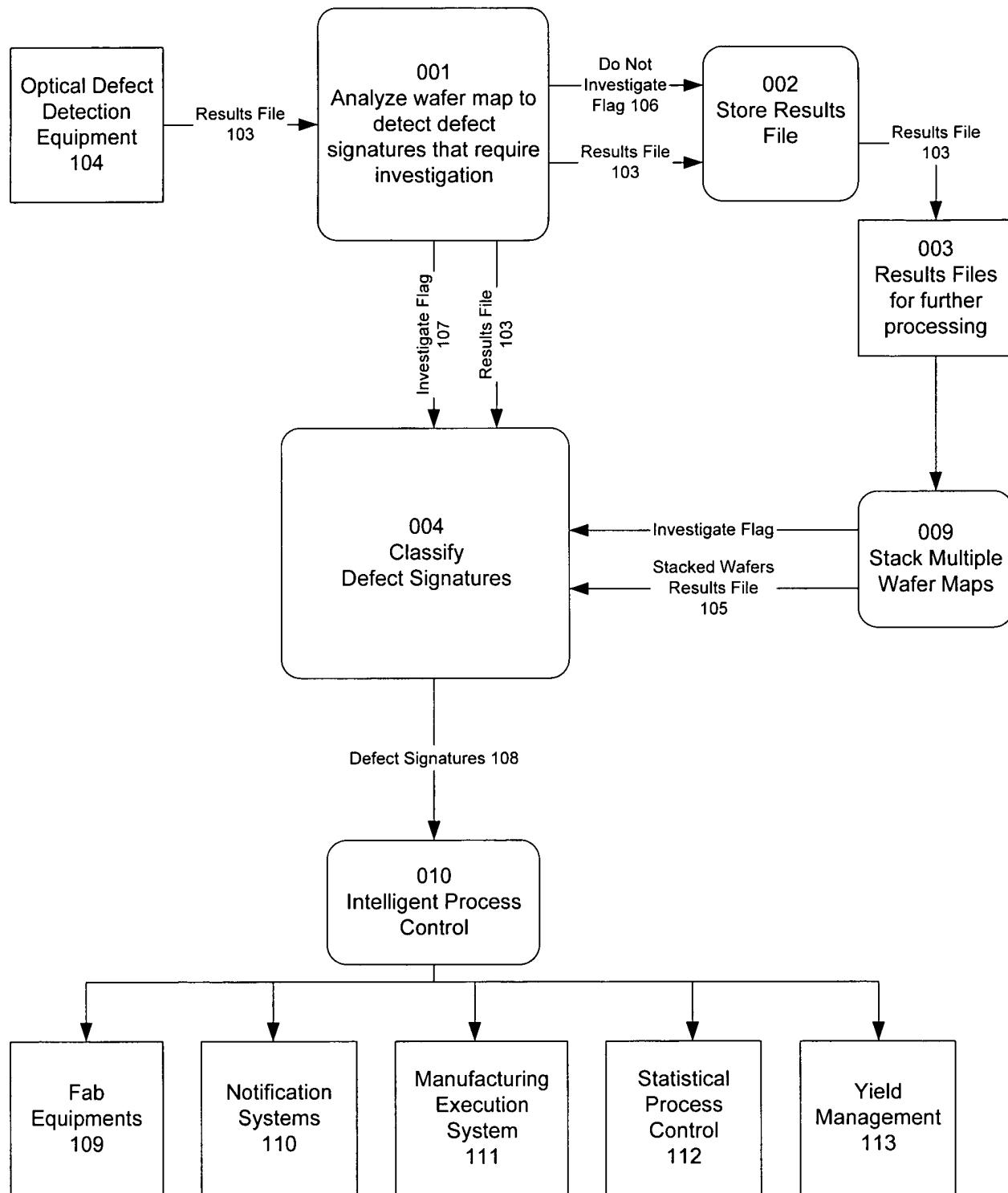
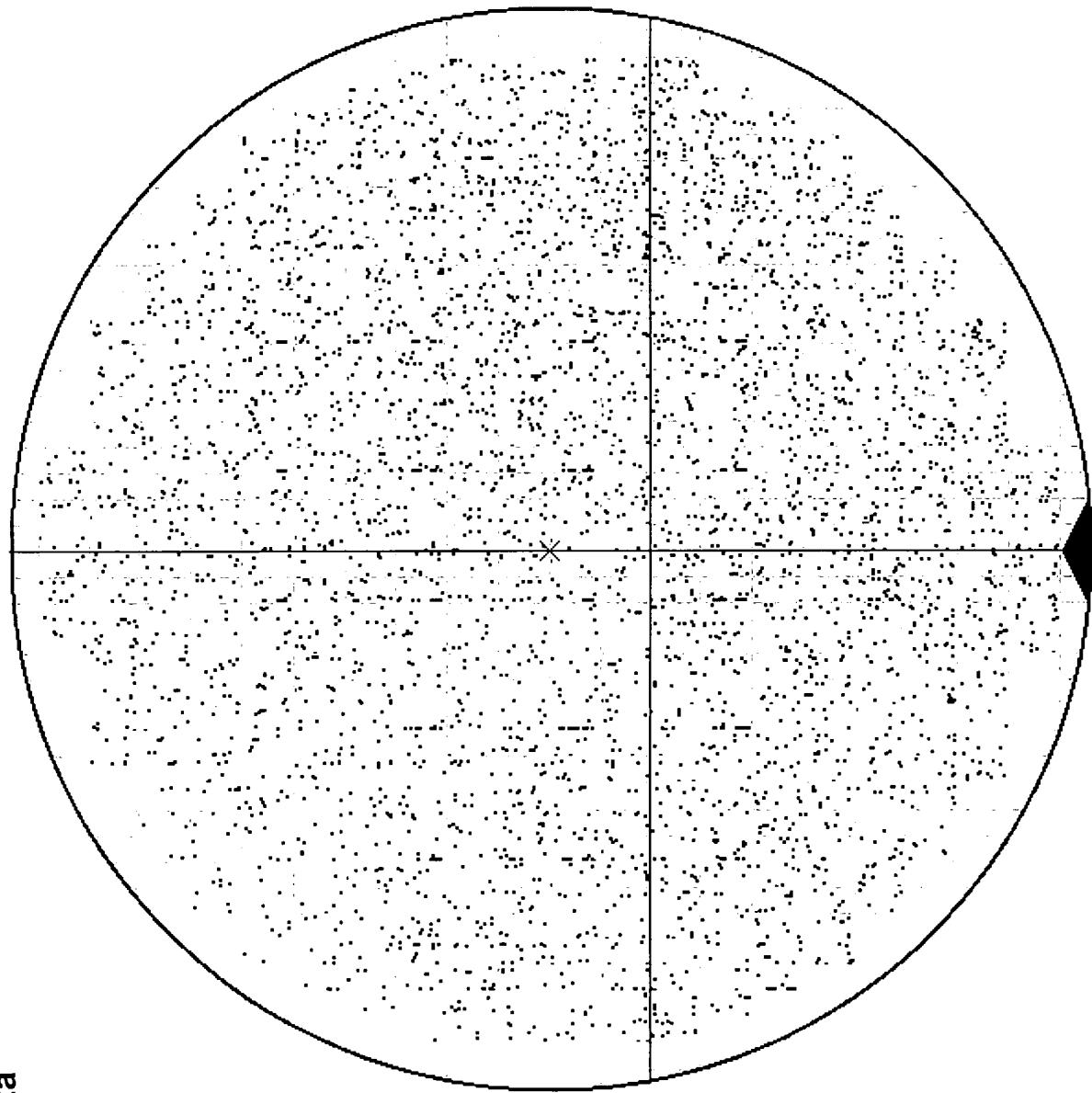


Figure 2

Figure 2a



001
Method to Detect Defect Patterns That Require Investigation

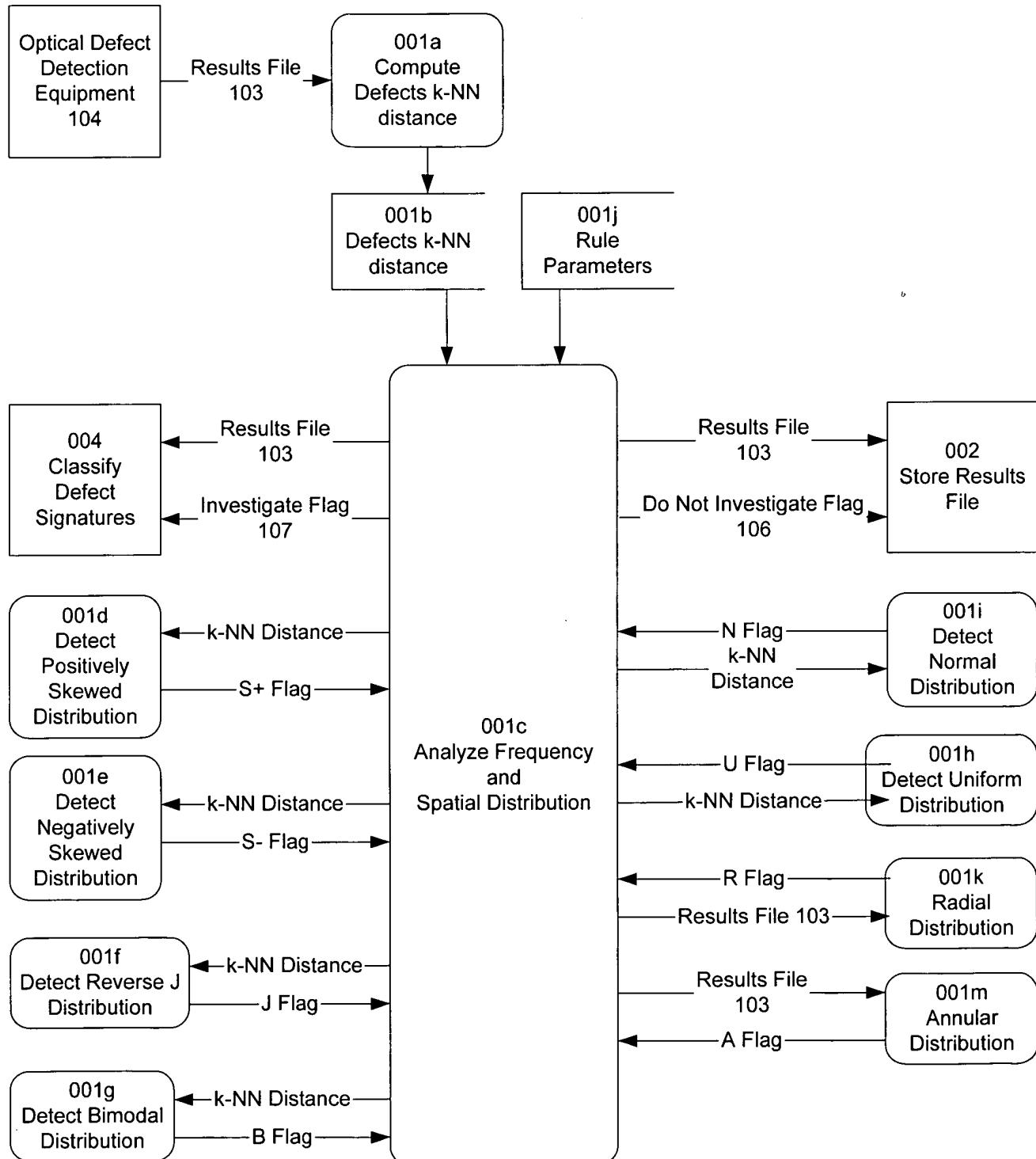


Figure 3

Figure 3a Relative Neighbor Nearest Distance Histogram ($k=1$)

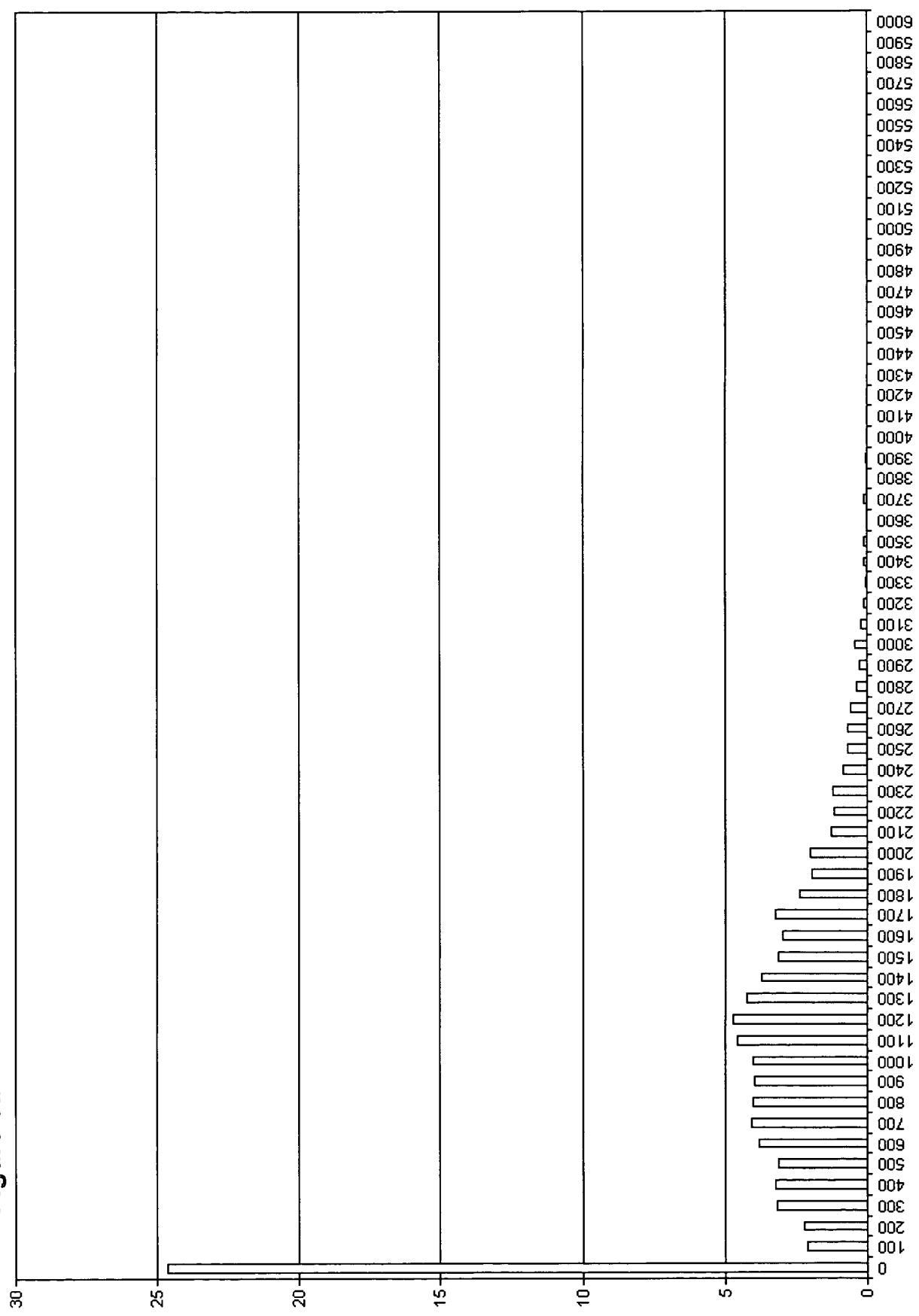


Figure 3b

Relative Neighbor Nearest Distance Histogram ($k=1$)

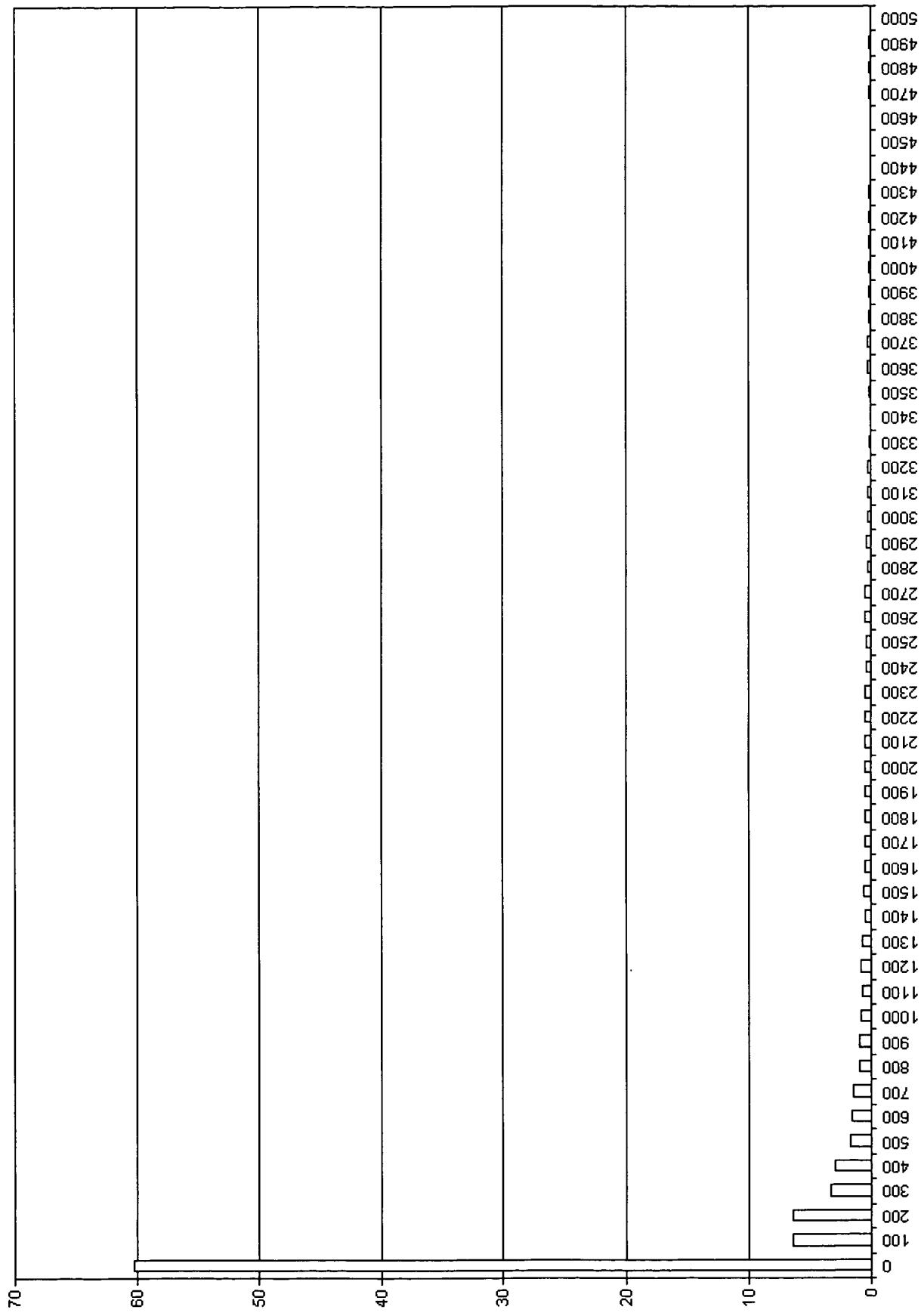


Figure 3c Relative Neighbor Nearest Distance Histogram ($k=1$)

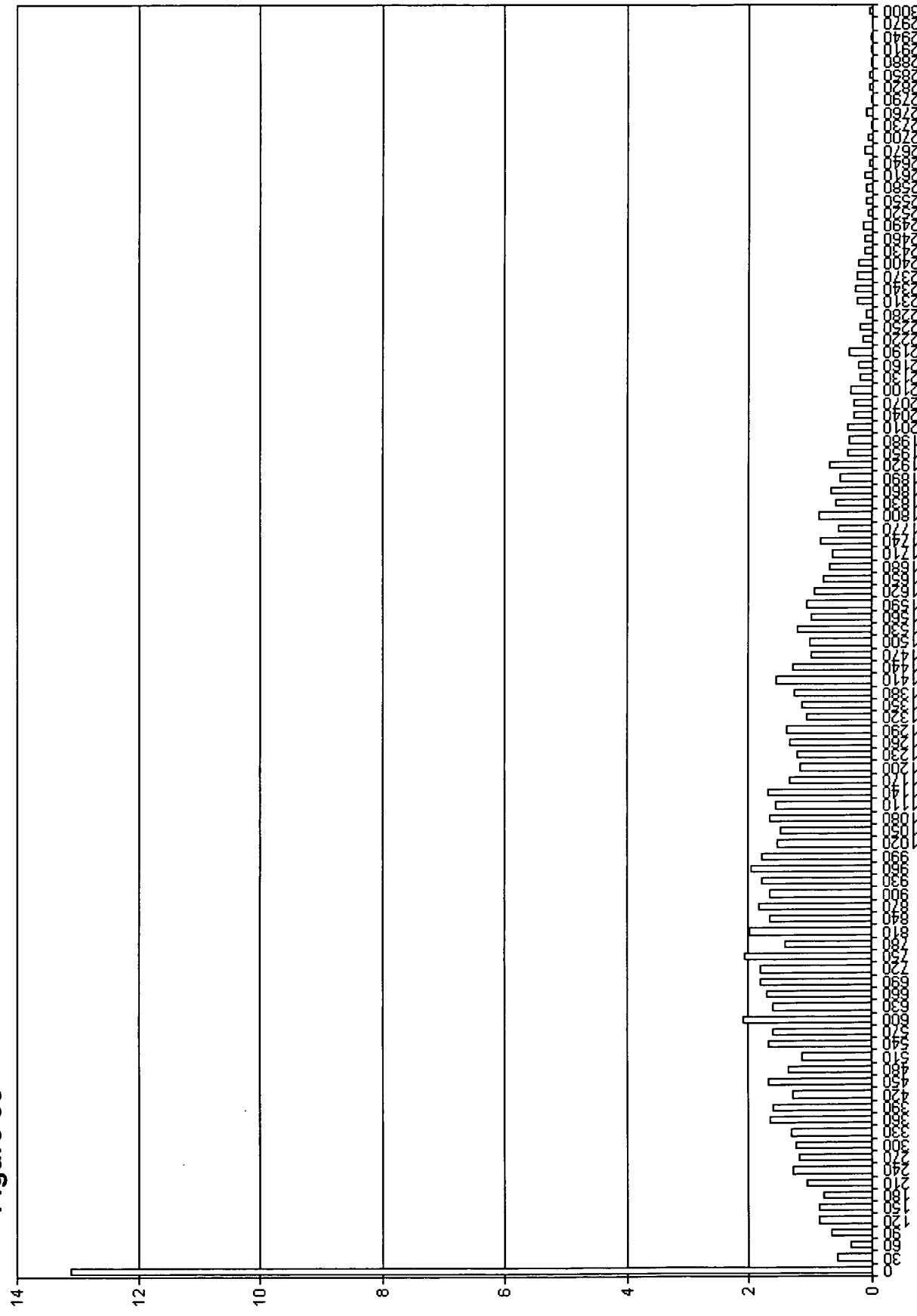


Figure 3d Radial Distribution Histogram

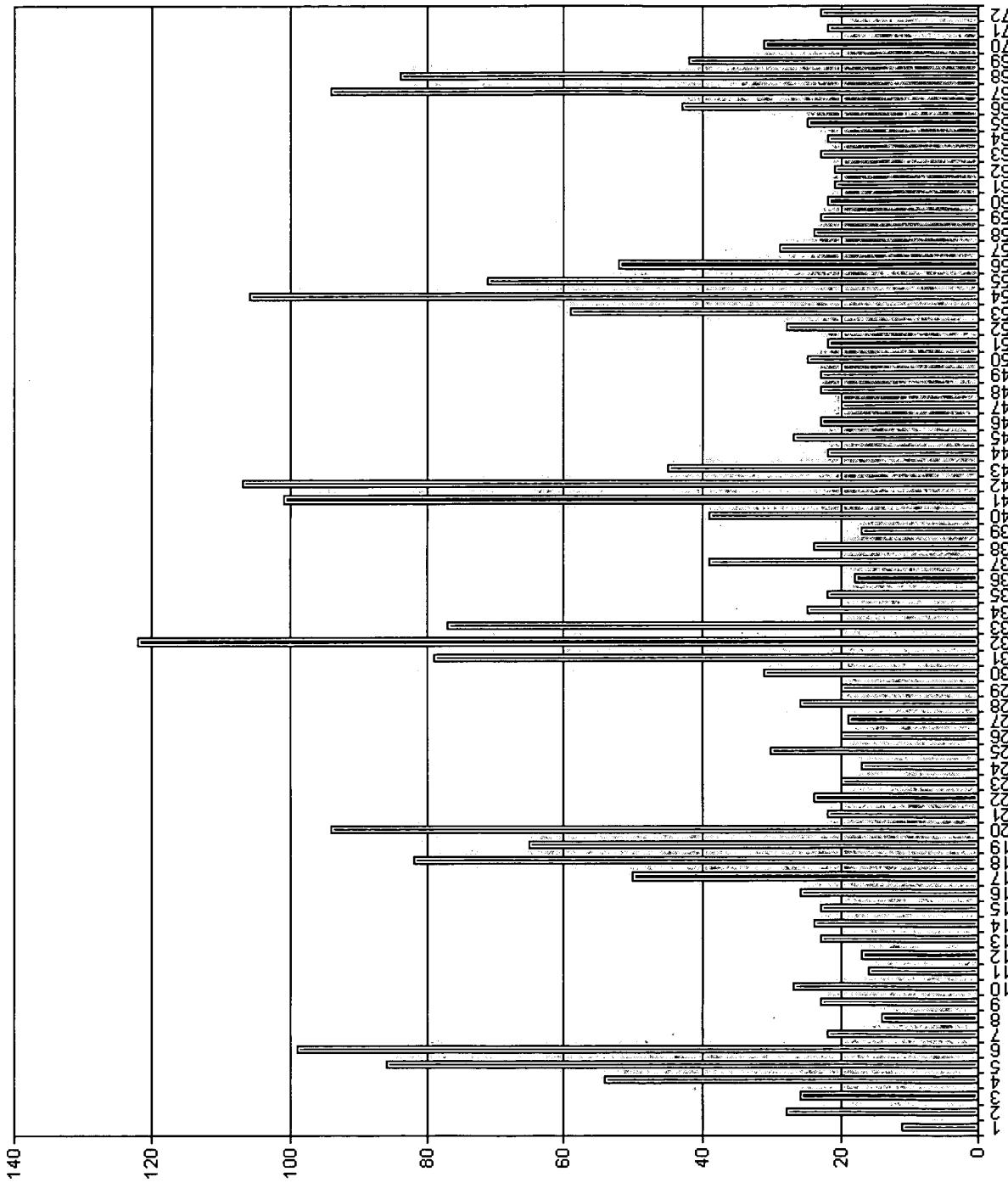


Figure 3e Neighbor Nearest Distance Histogram ($k=1$)

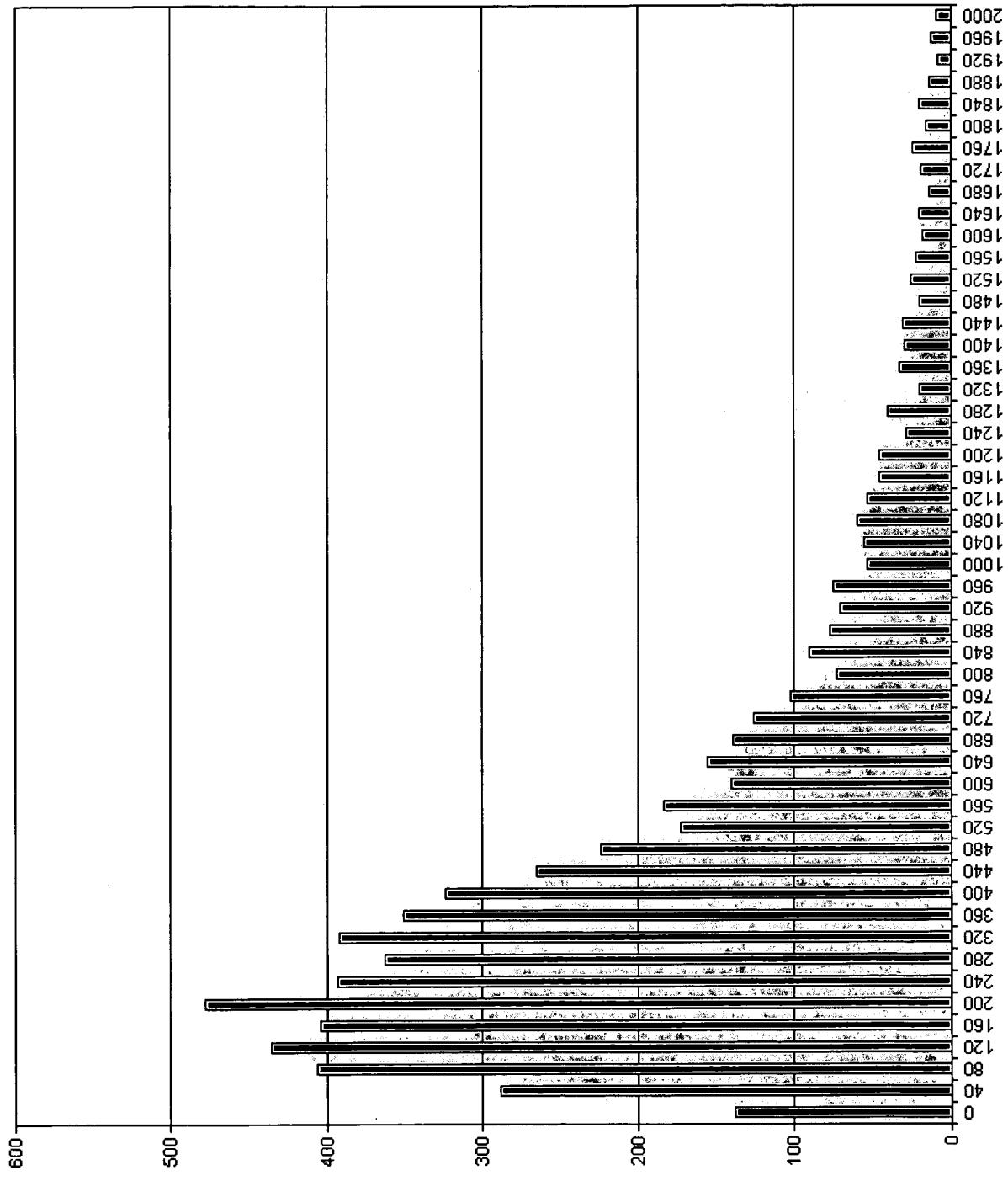


Figure 3f

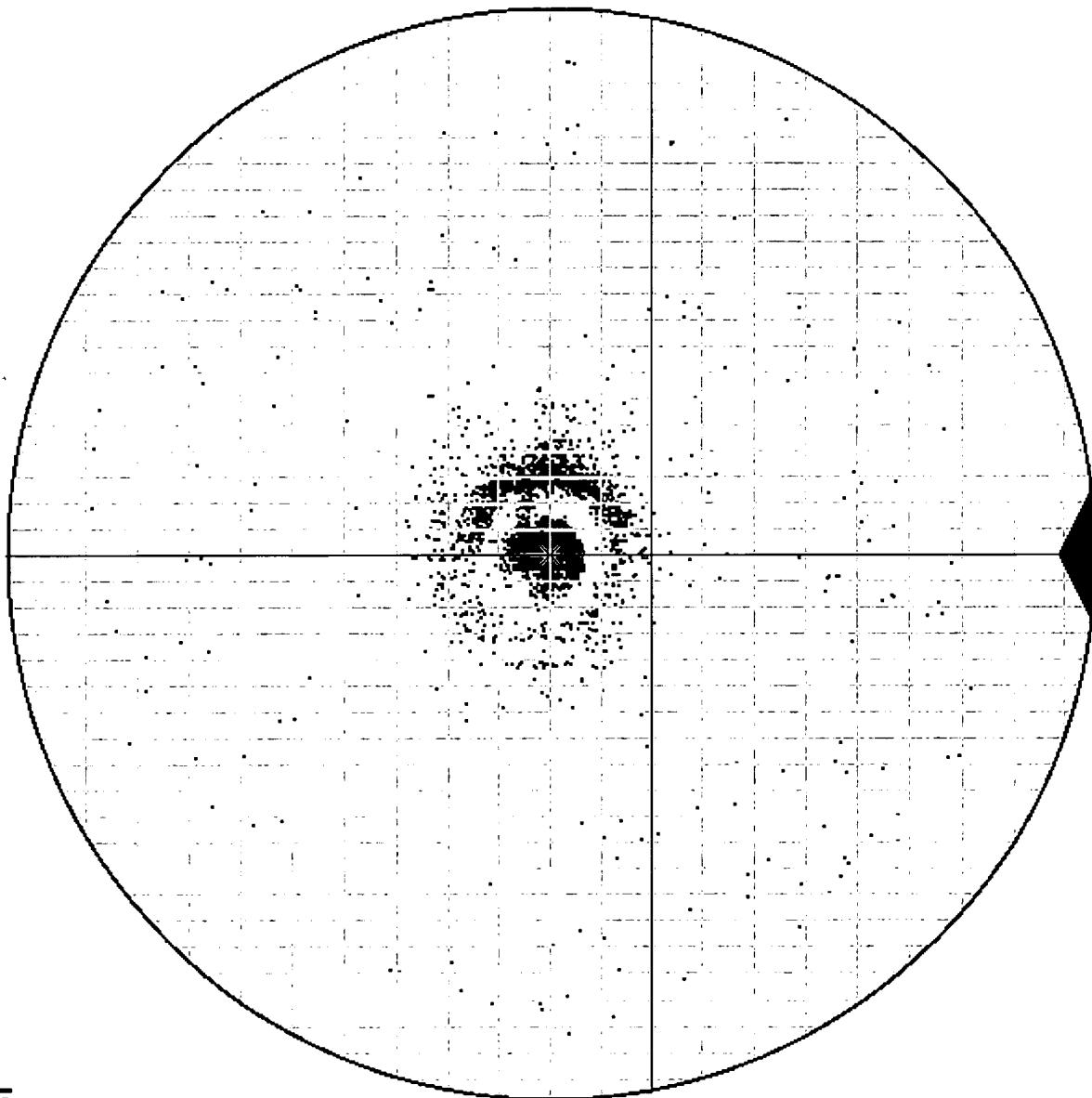


Figure 3g

Annular Distribution Histogram

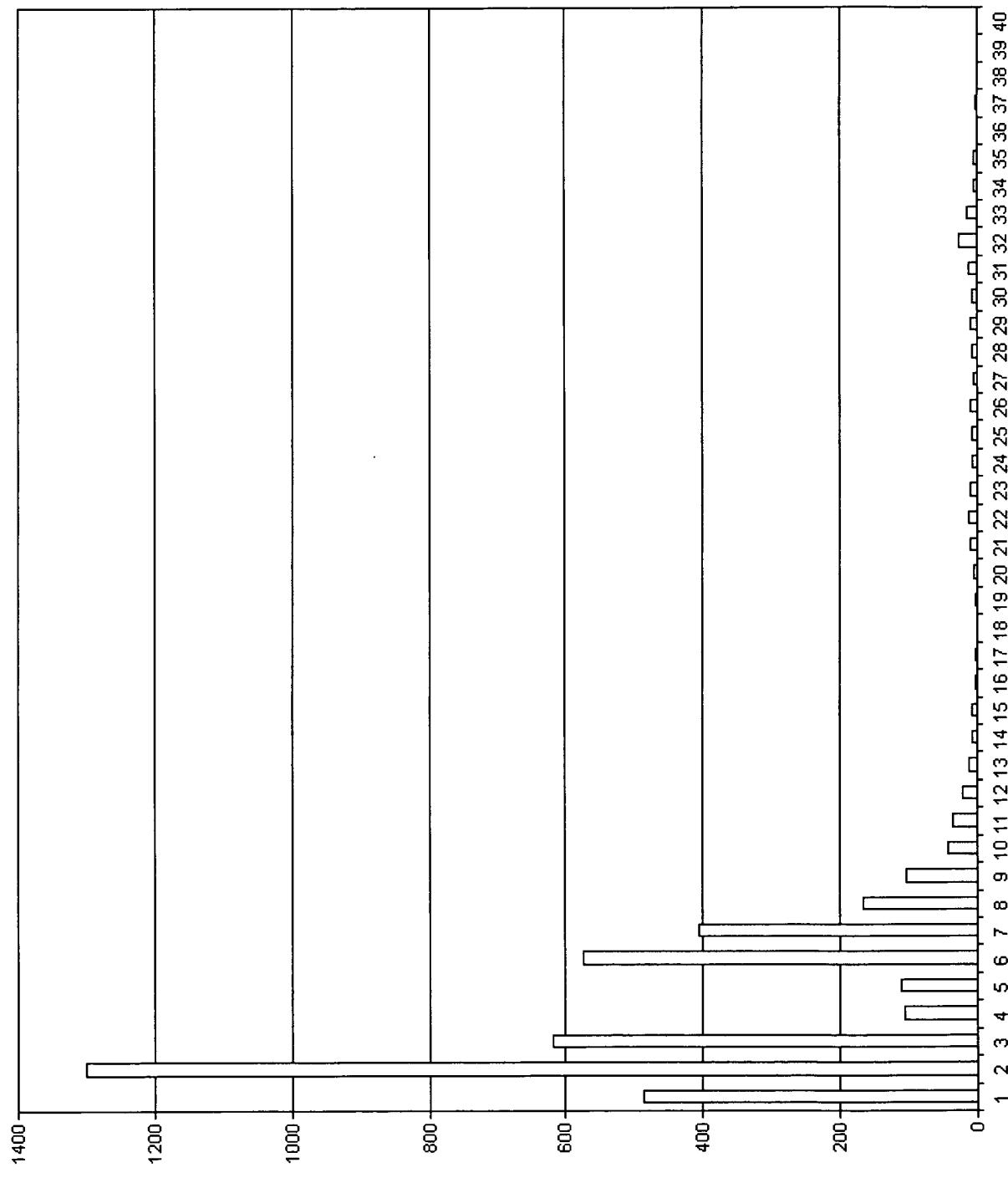


Figure 3h

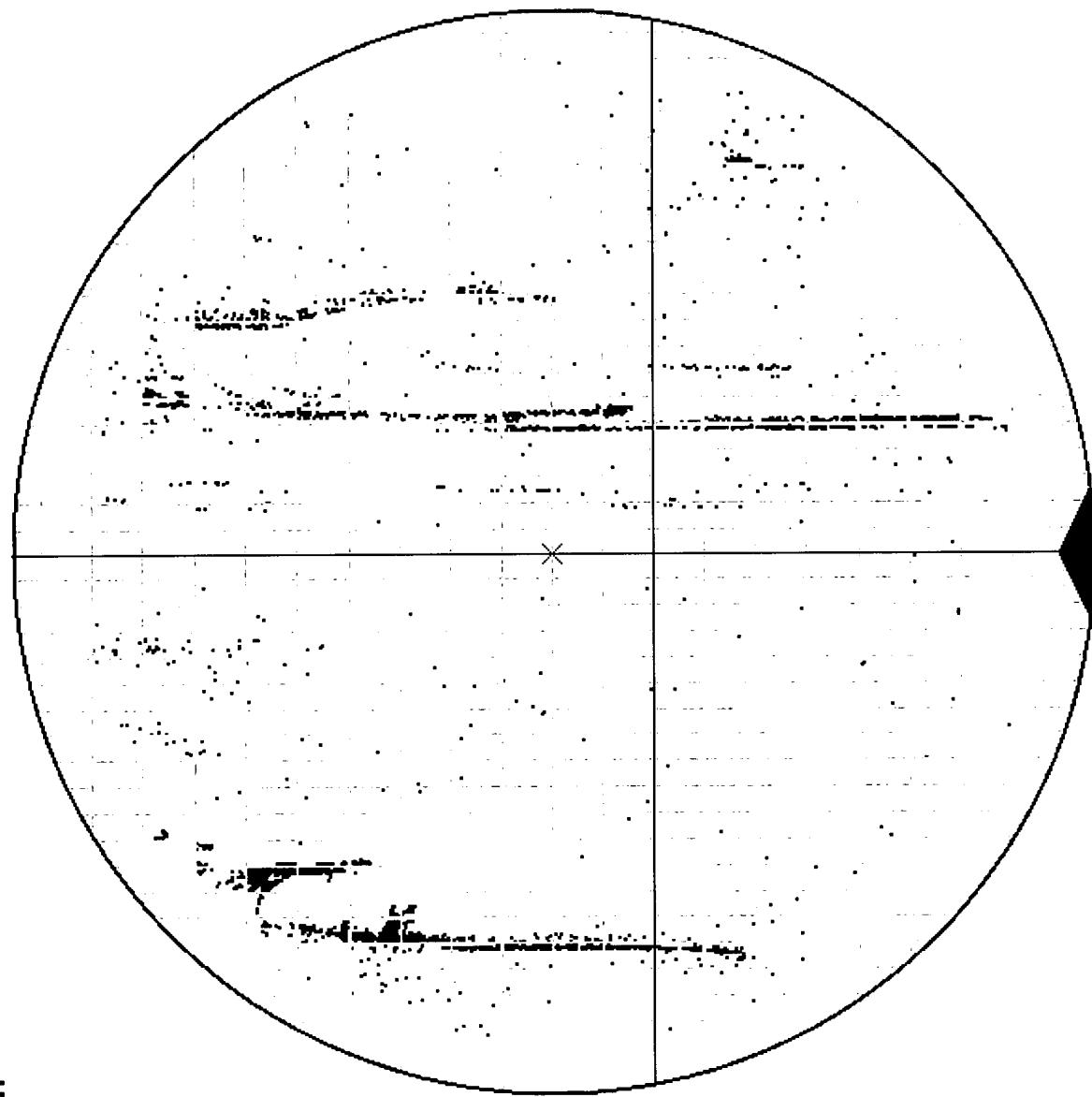


Figure 3i Horizontal Distribution Histogram

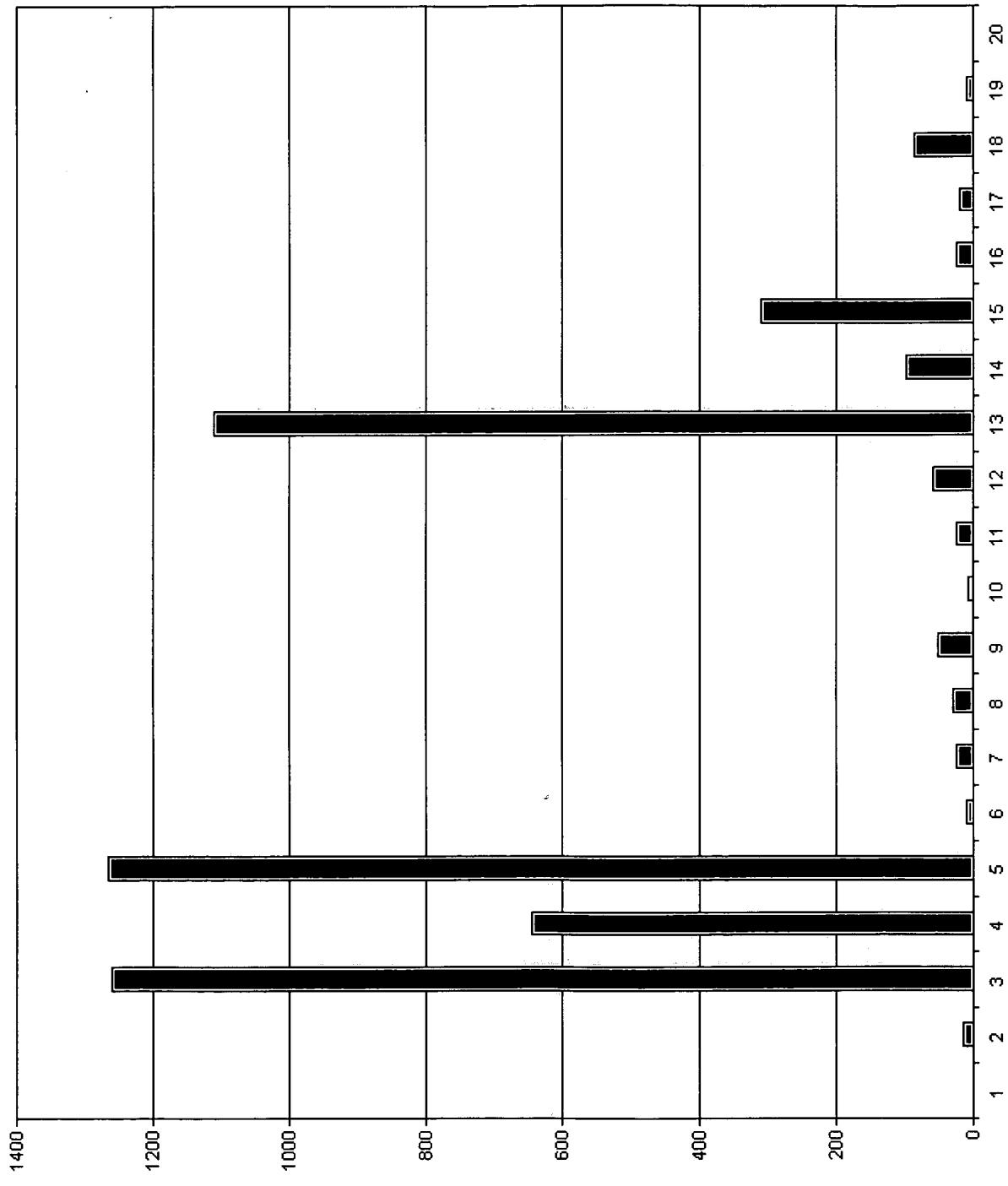
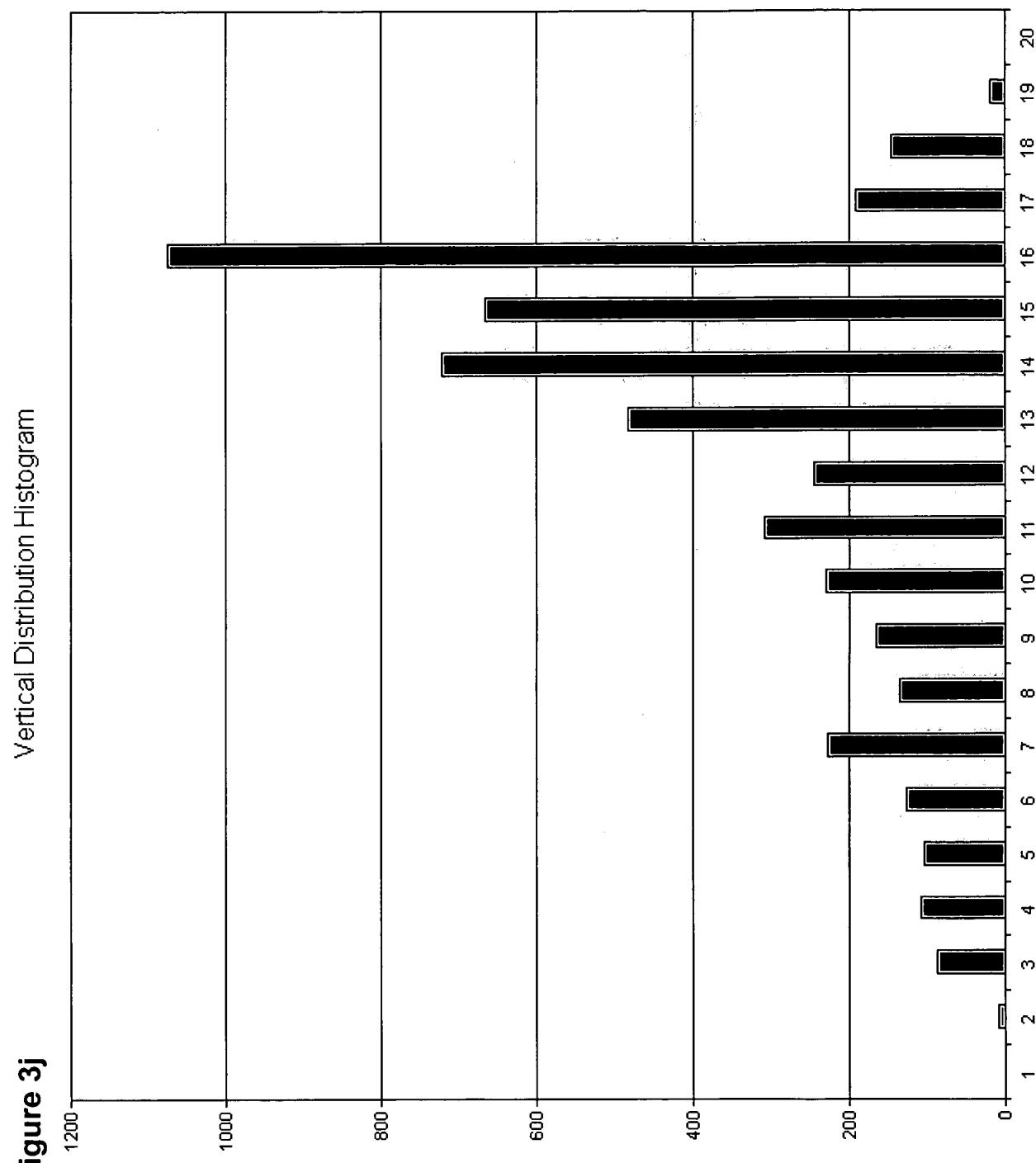


Figure 3j



004
Classify Defect Signatures

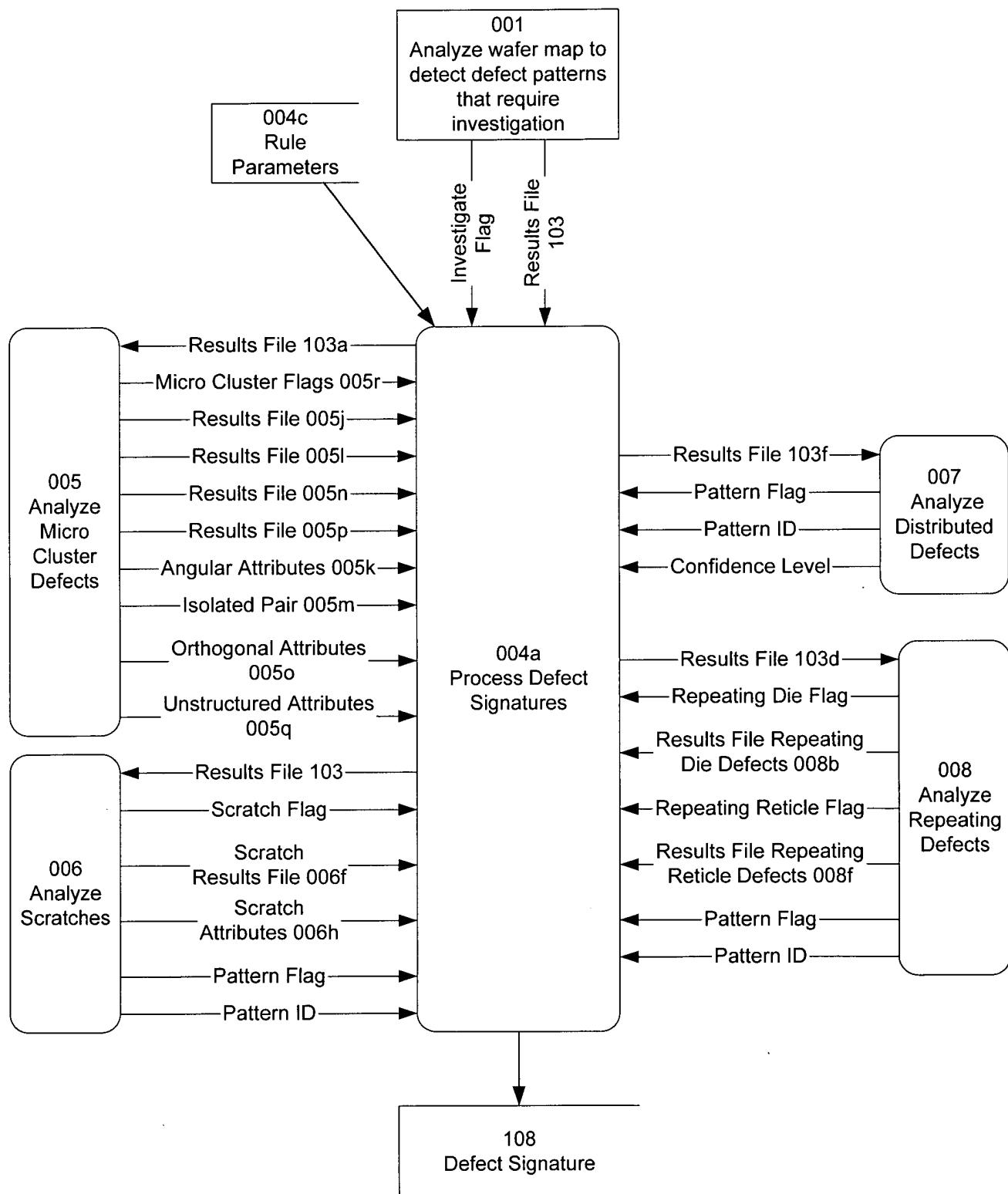


Figure 4

005
Analyze Micro Cluster Defects

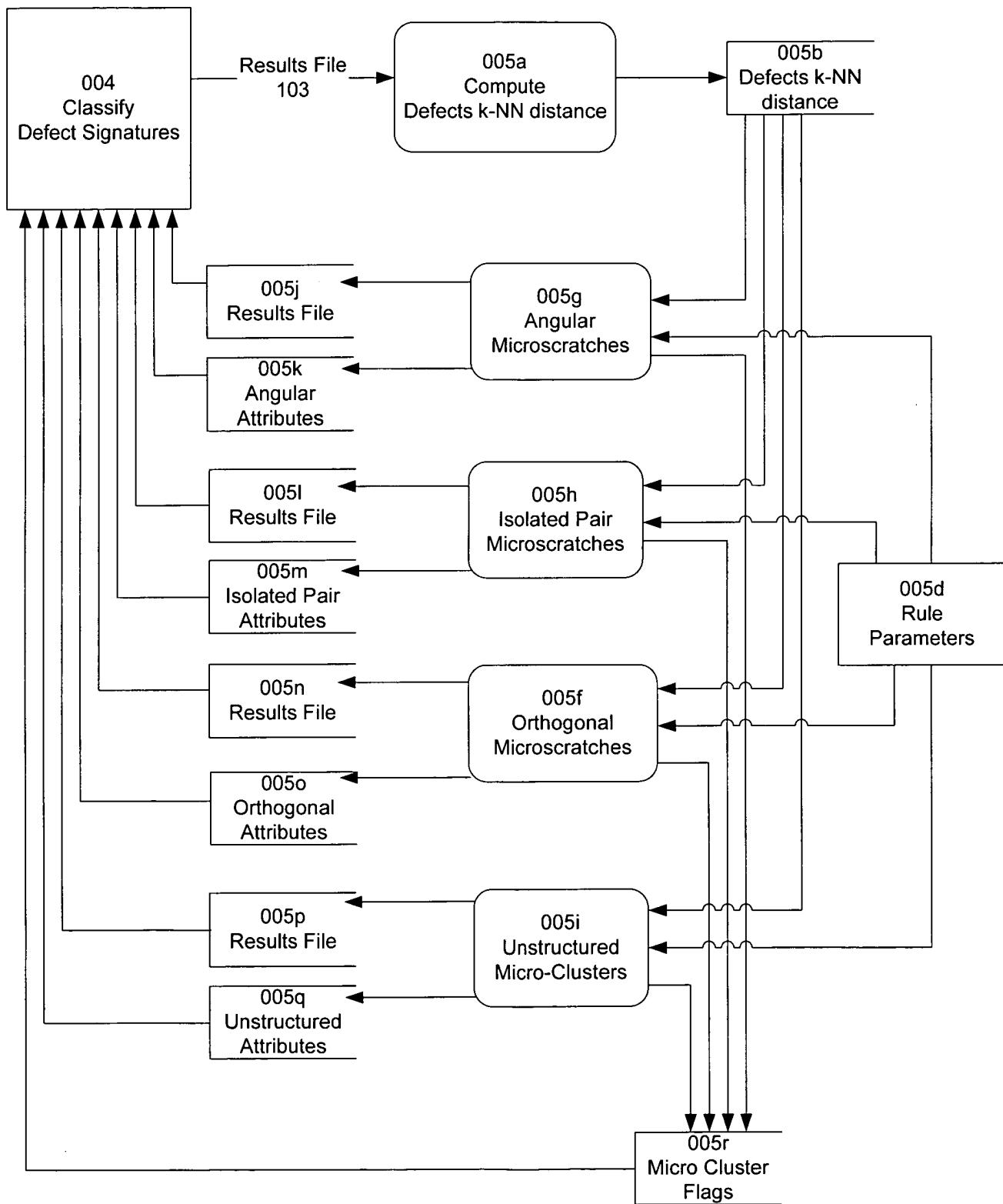


Figure 5

Figure 5a

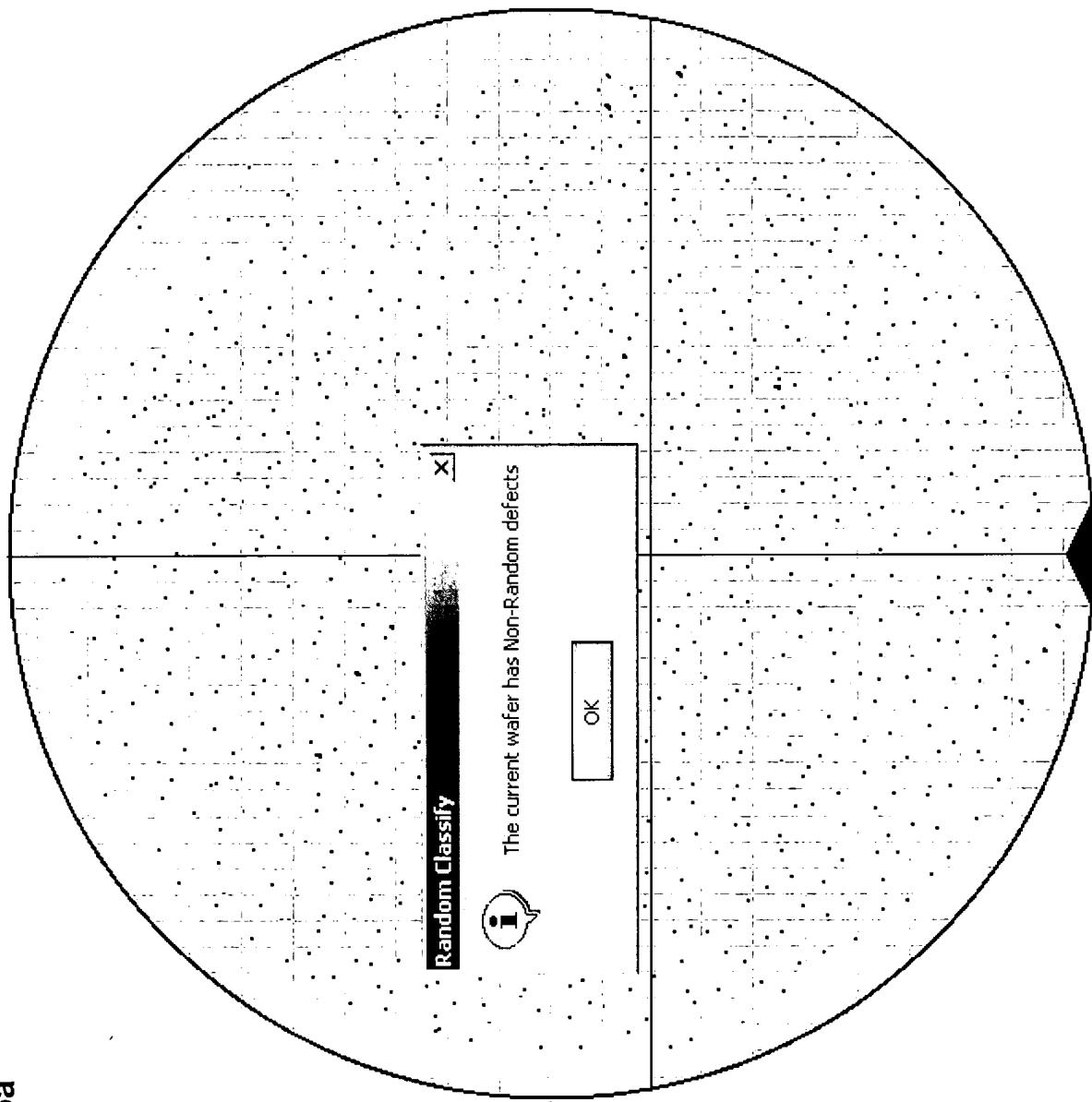


Figure 5b

Relative Neighbor Nearest Distance Histogram ($k=1$)

25

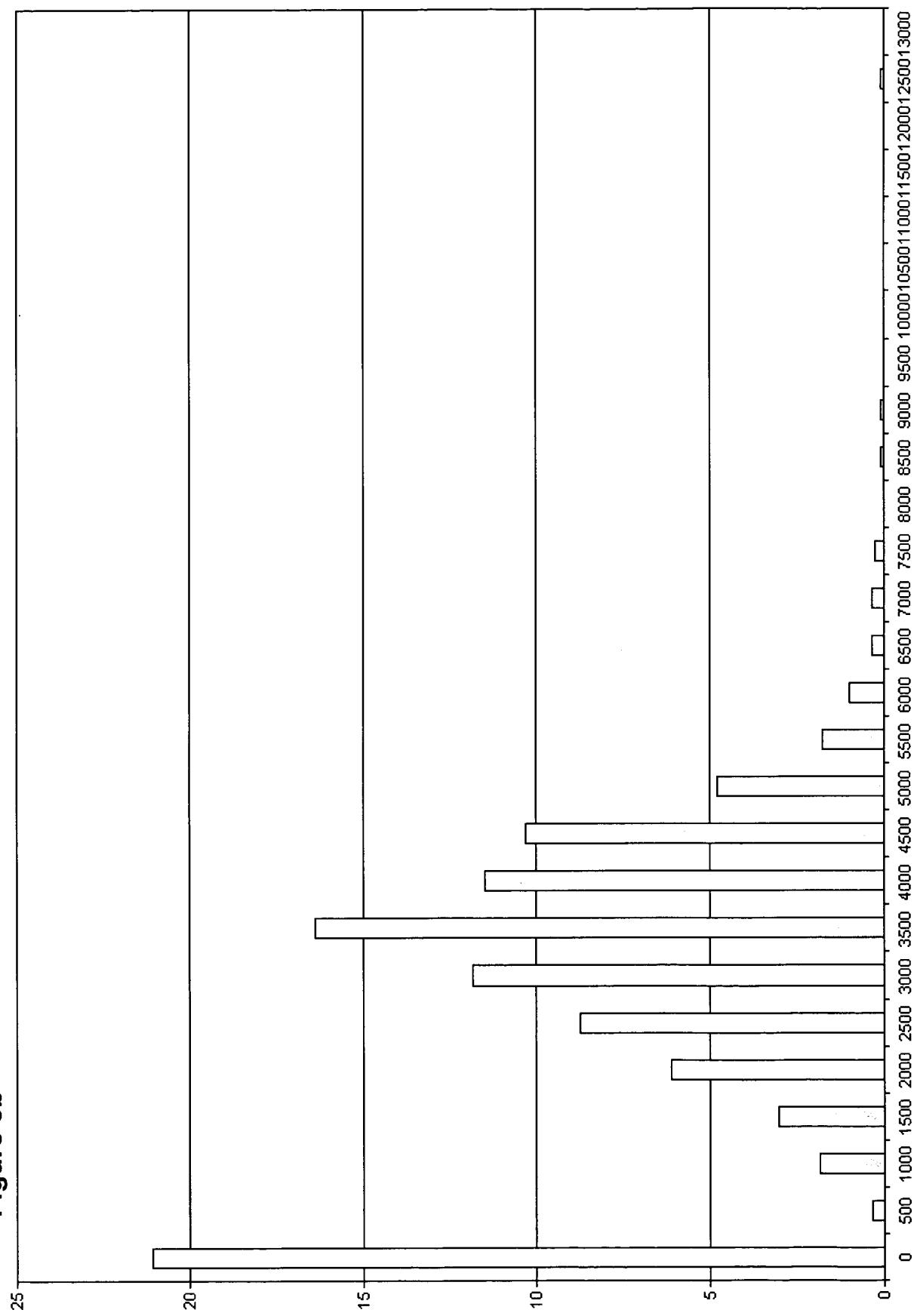


Figure 5c

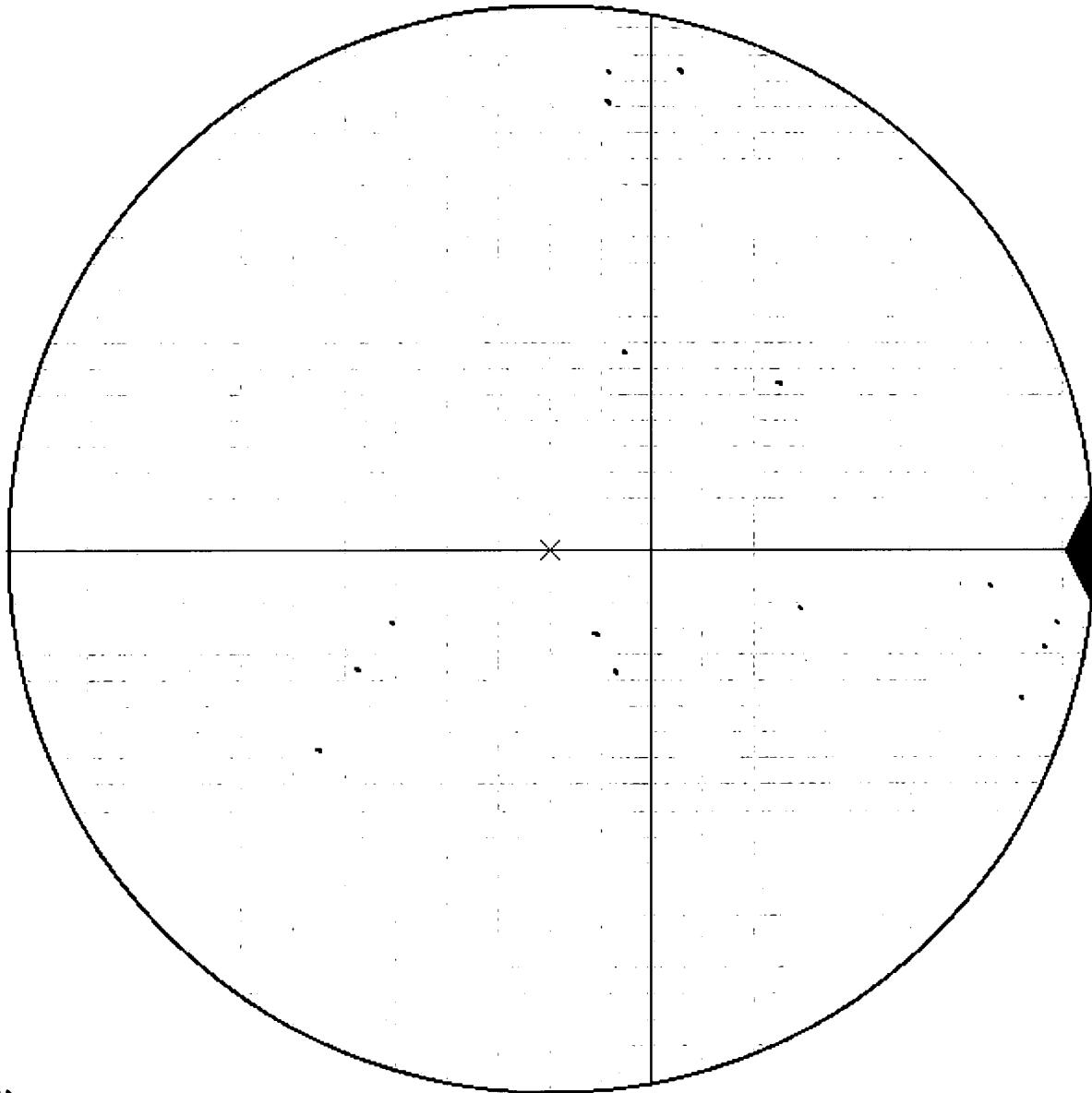
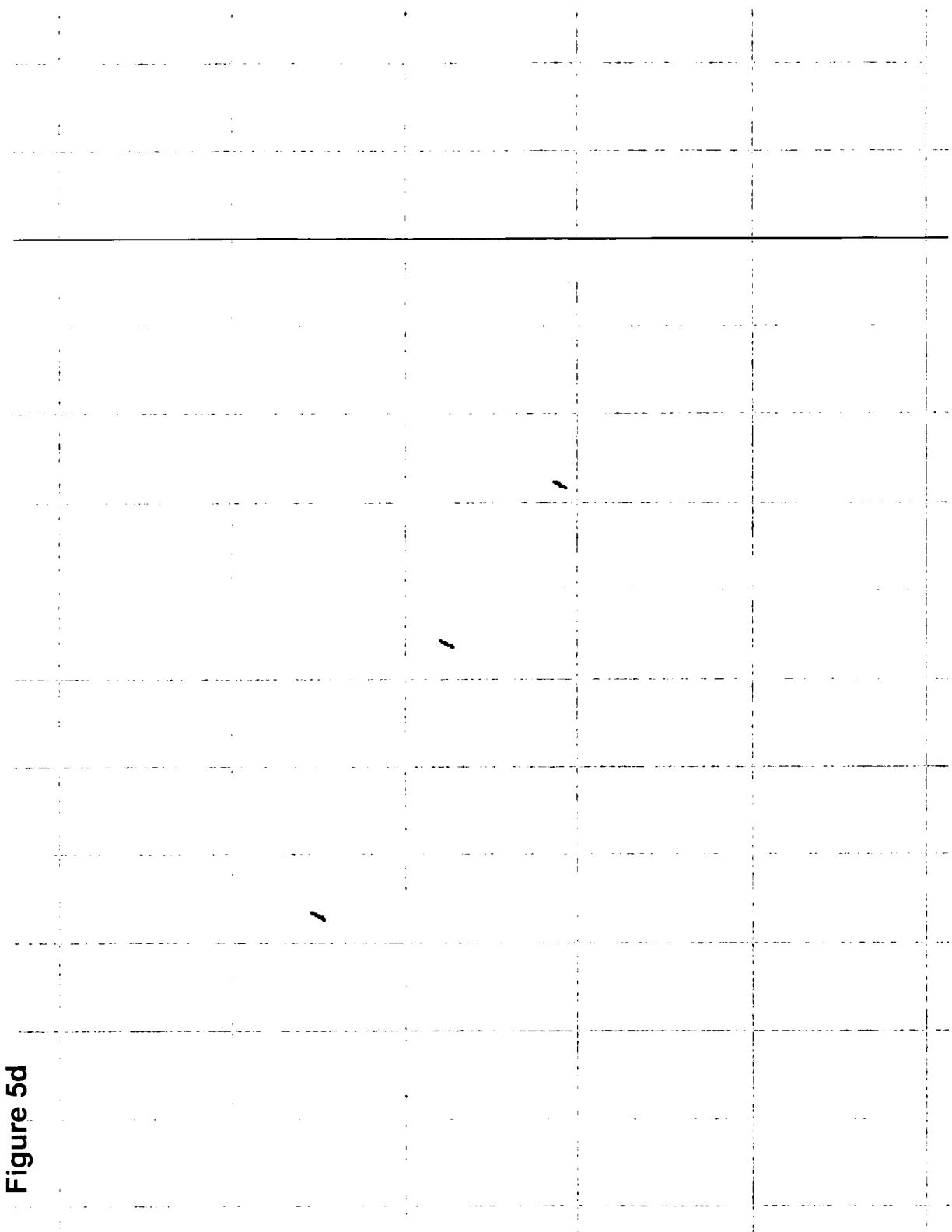


Figure 5d



006
Analyze Scratches

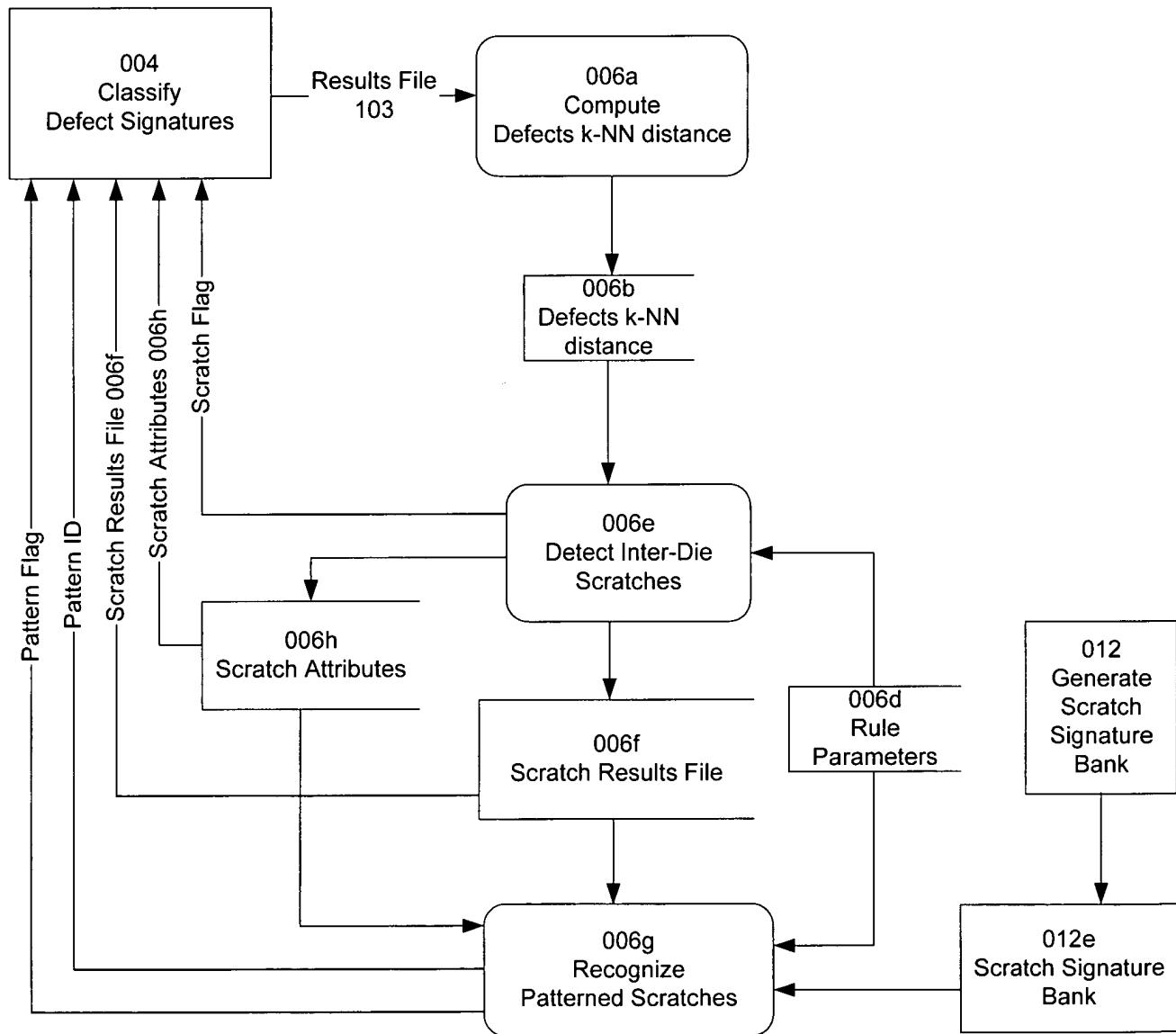


Figure 6

Figure 6a

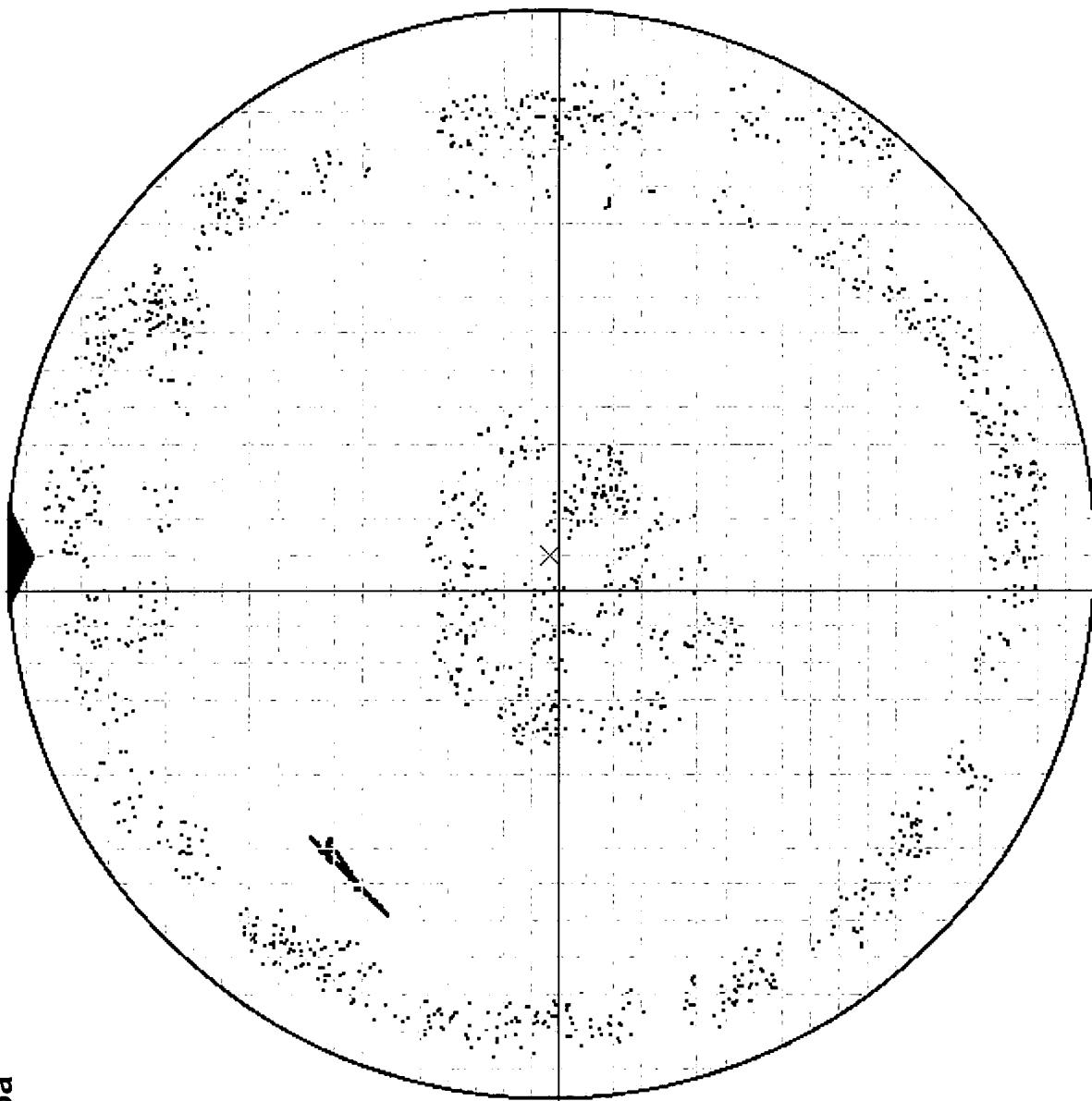
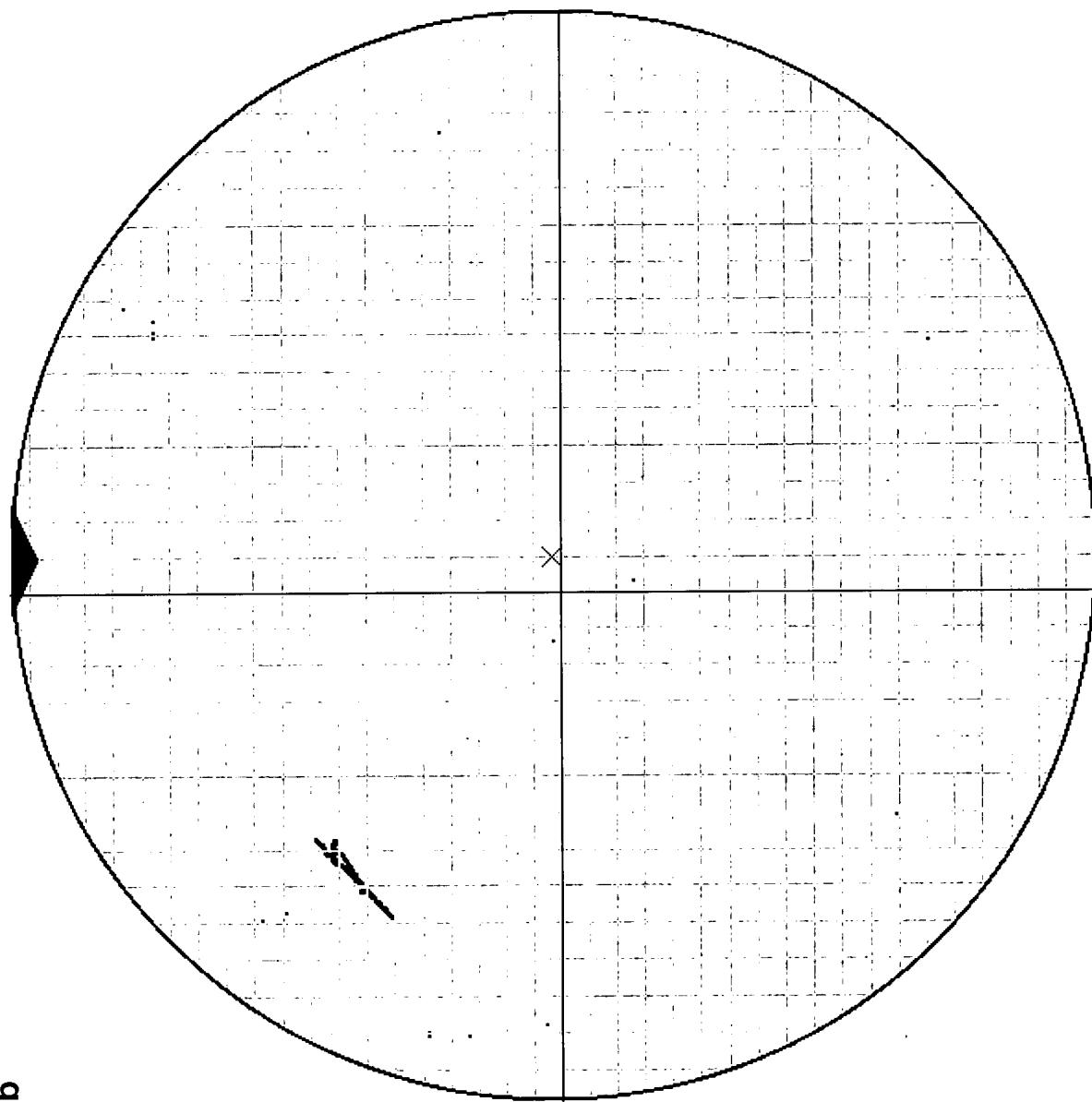


Figure 6b



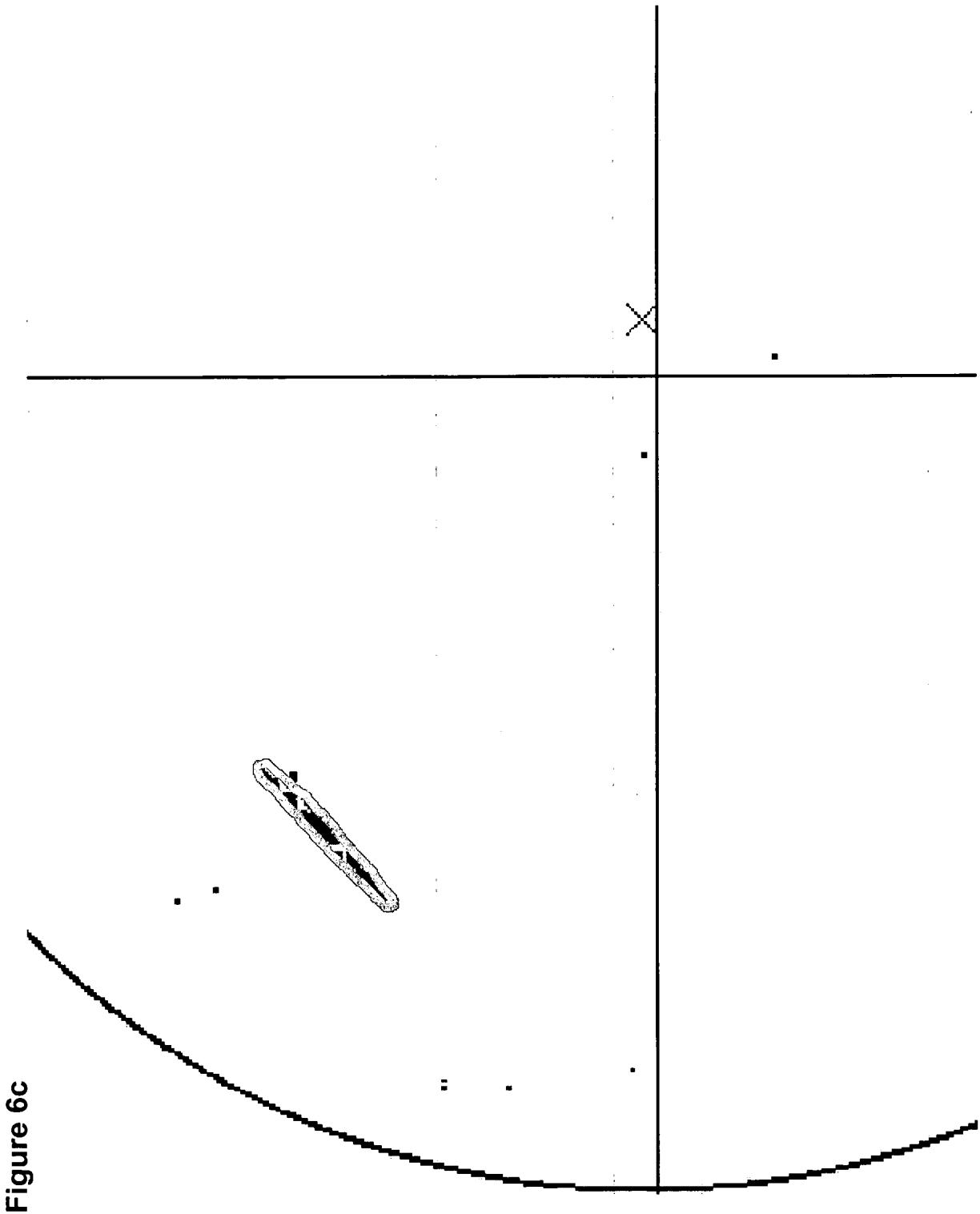


Figure 6c

Figure 6d

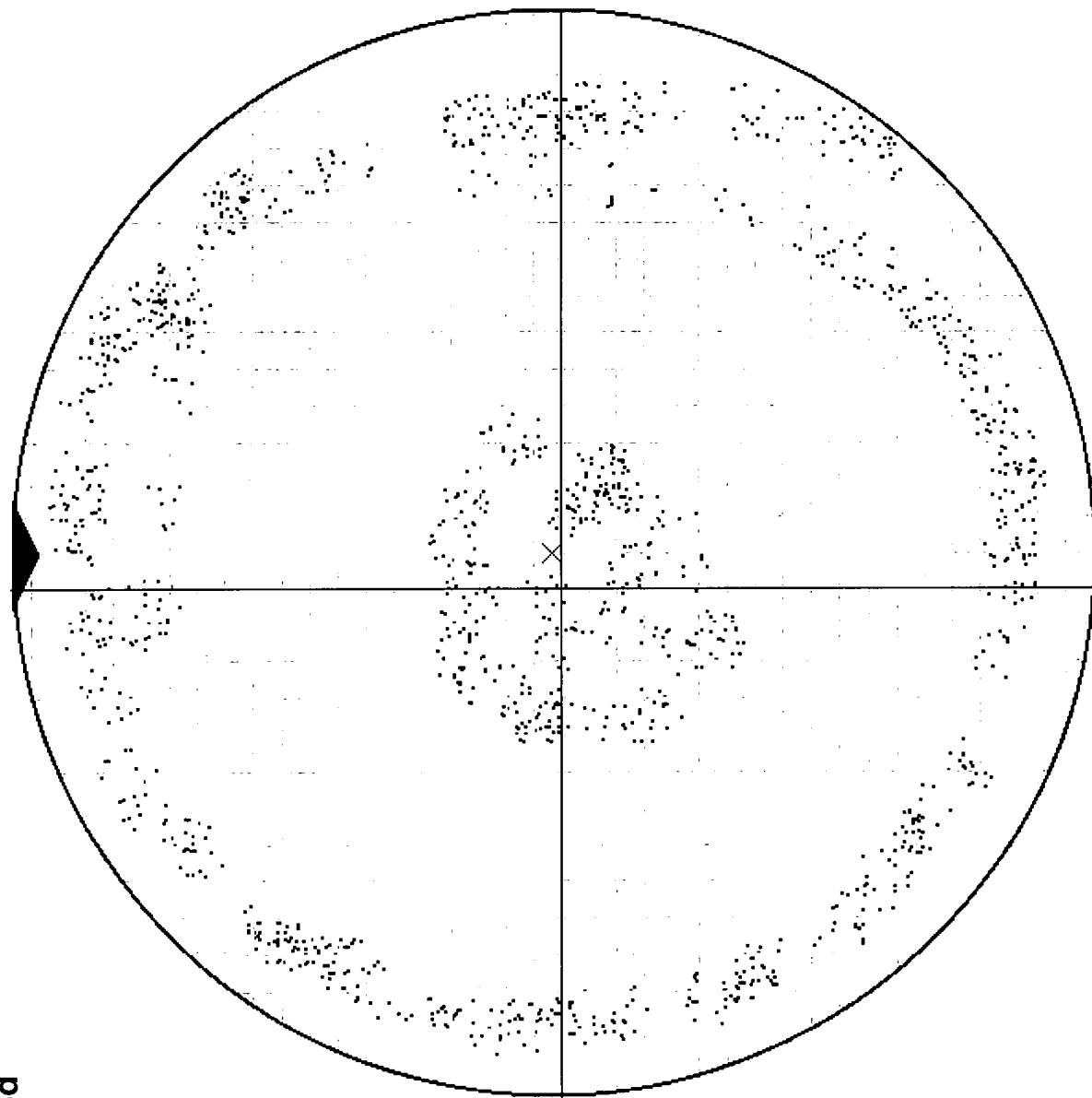


Figure 6e

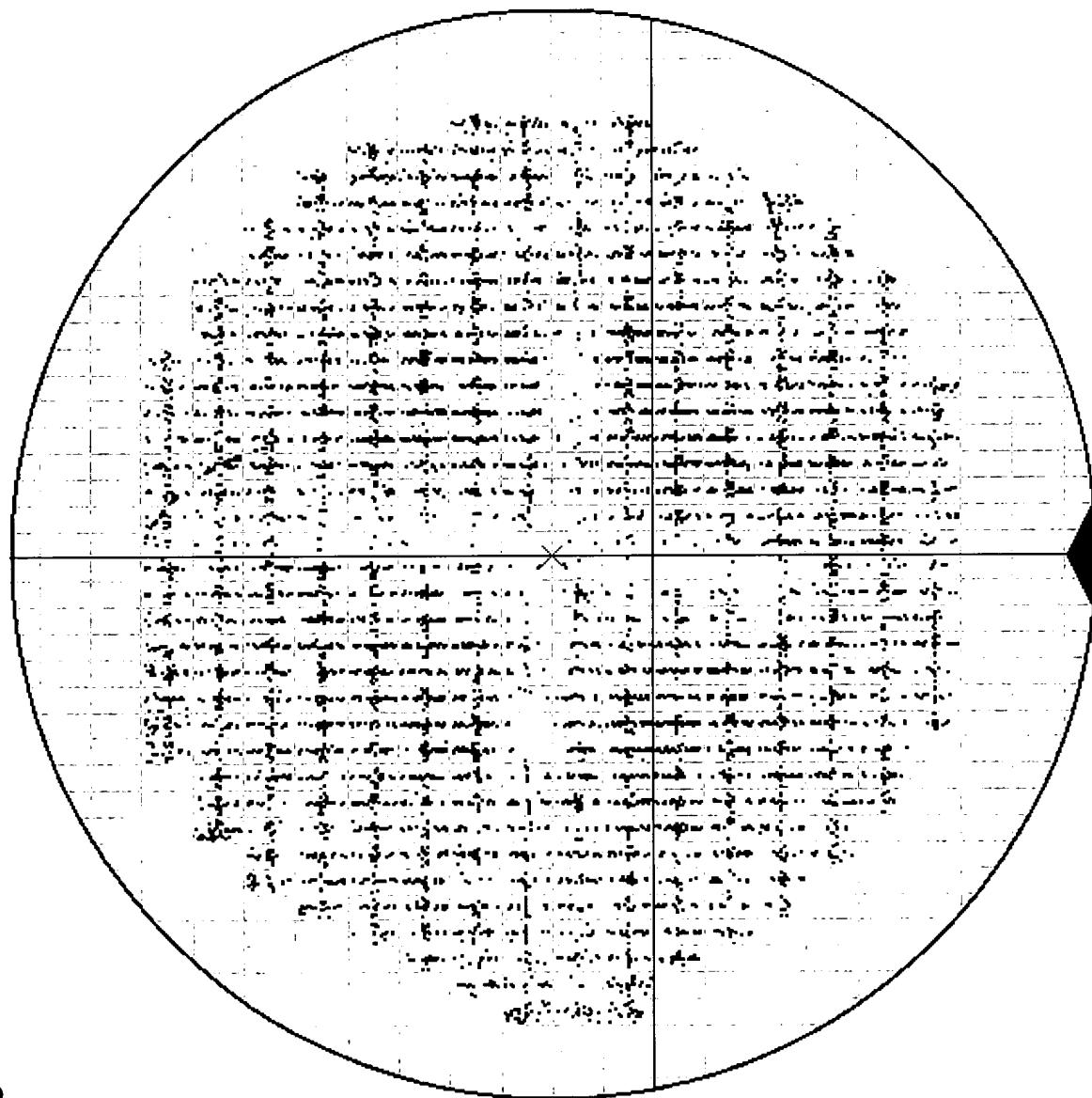


Figure 6f Neighbor Nearest Distance Histogram ($k=1$)

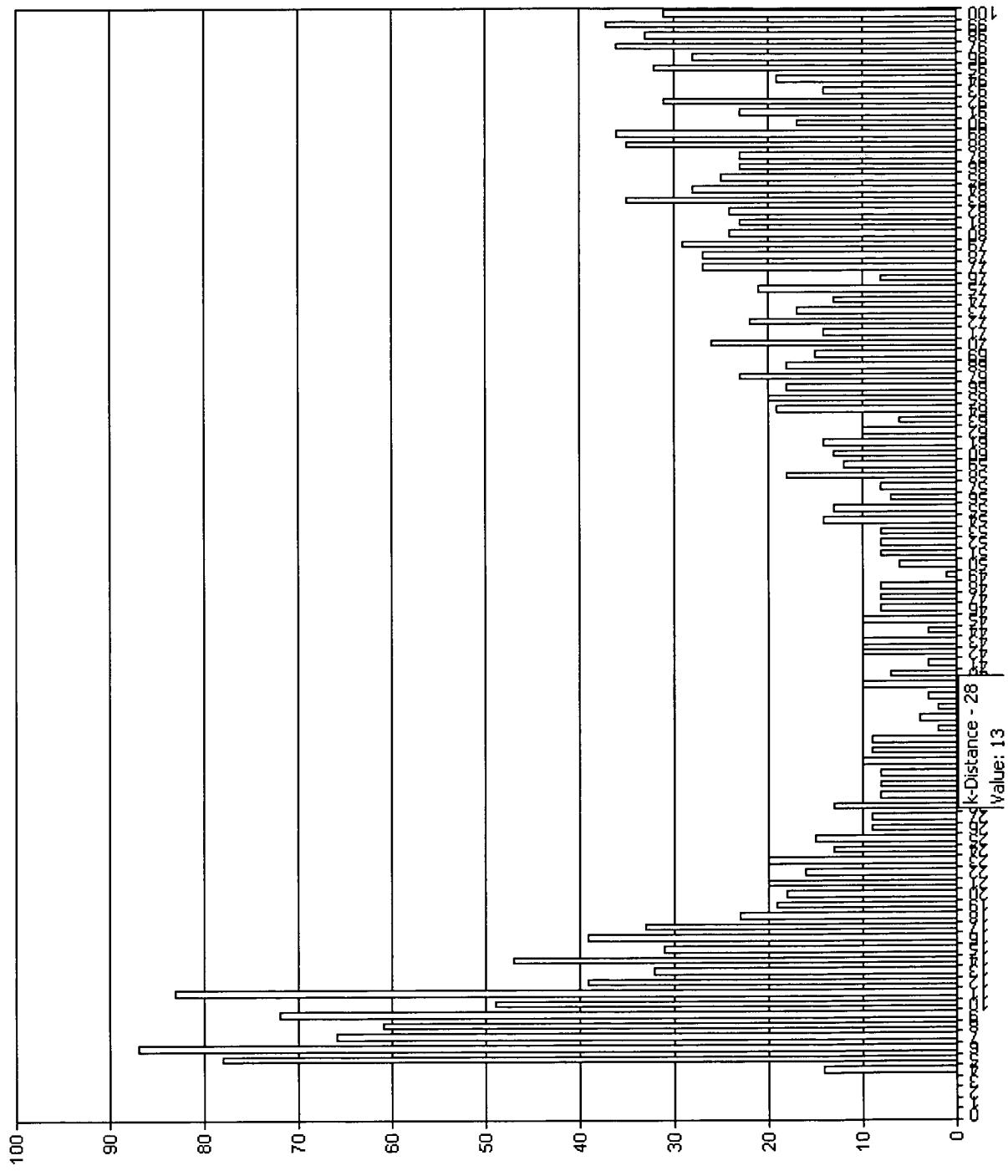


Figure 6g

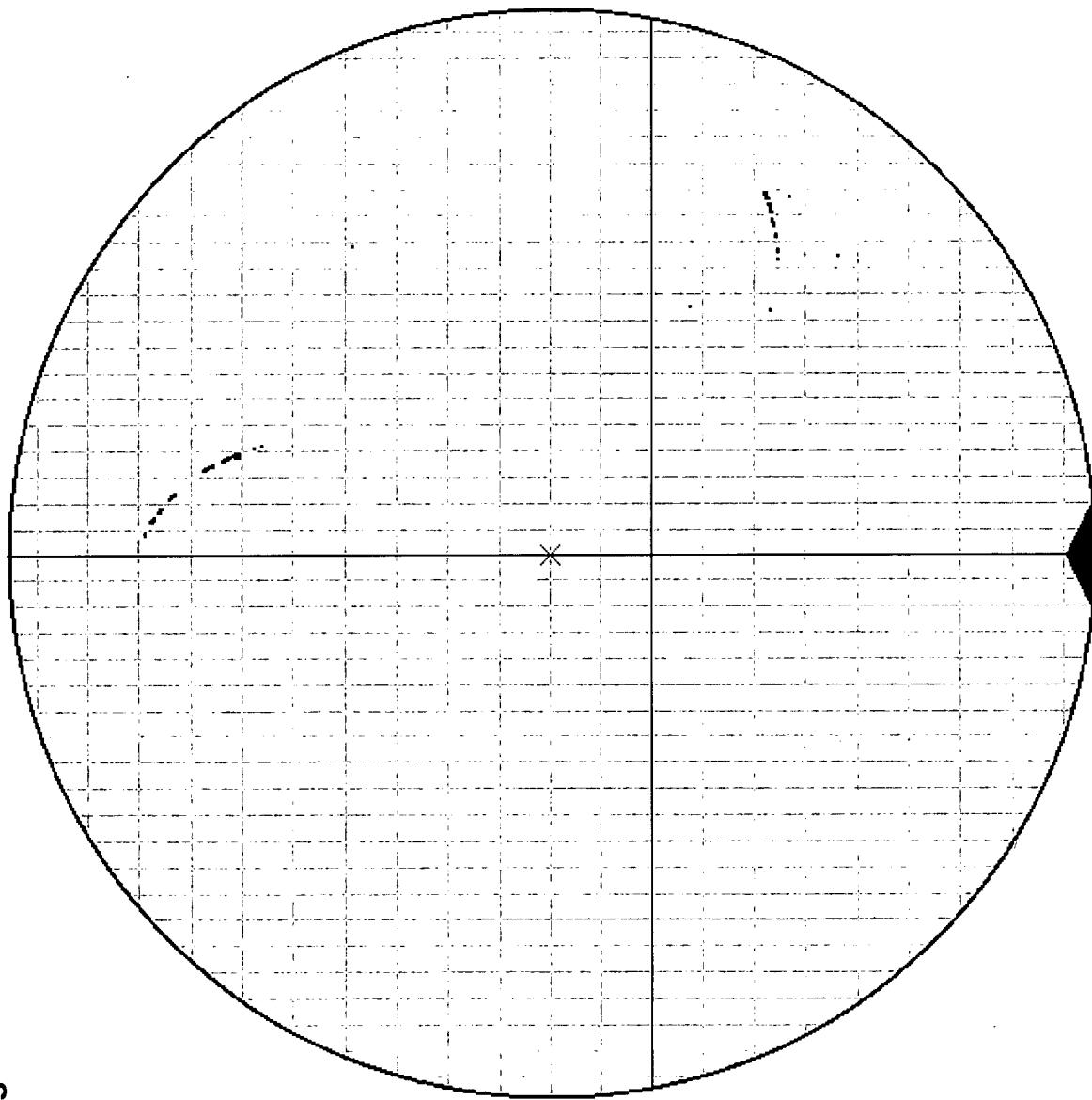


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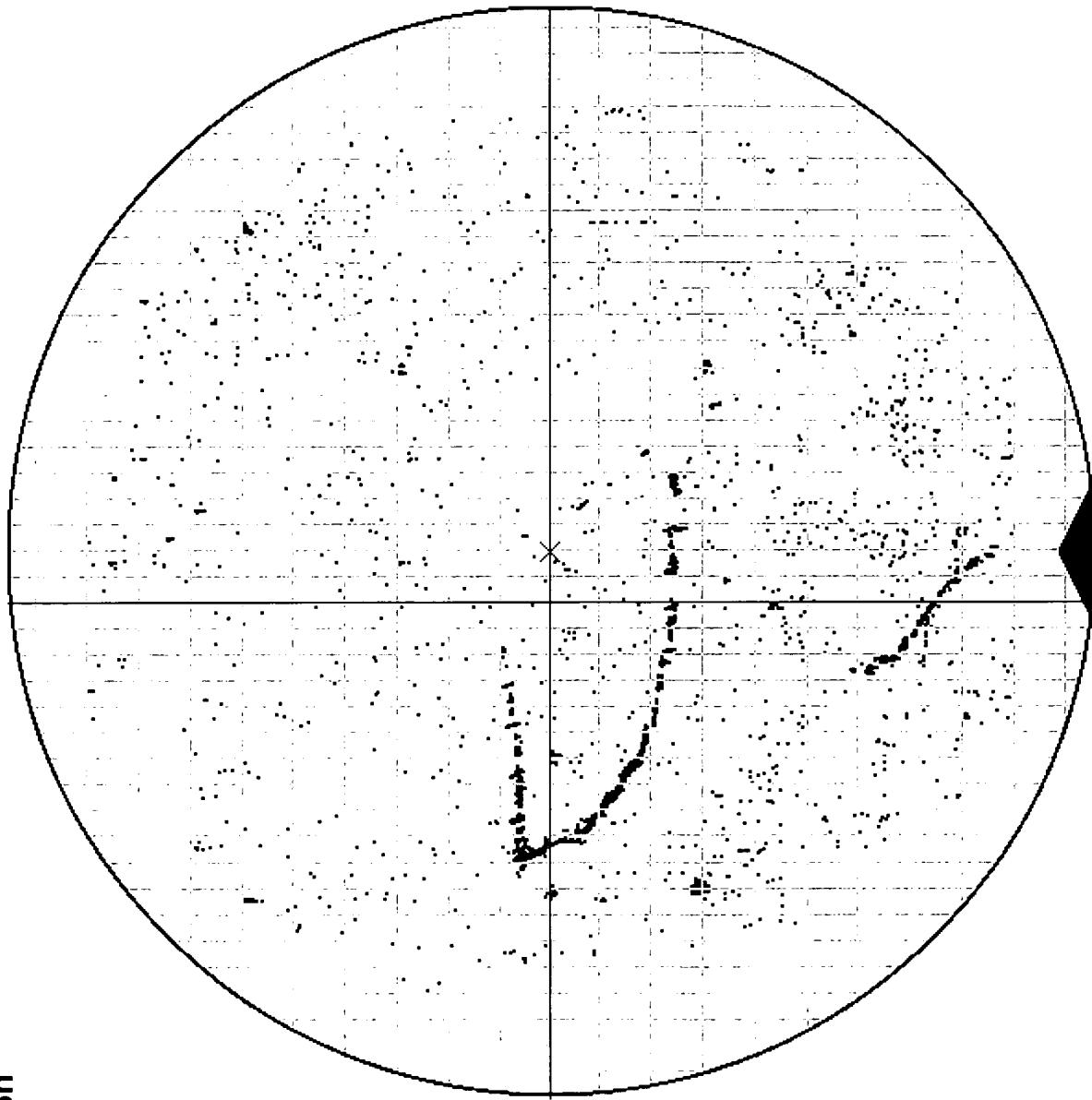
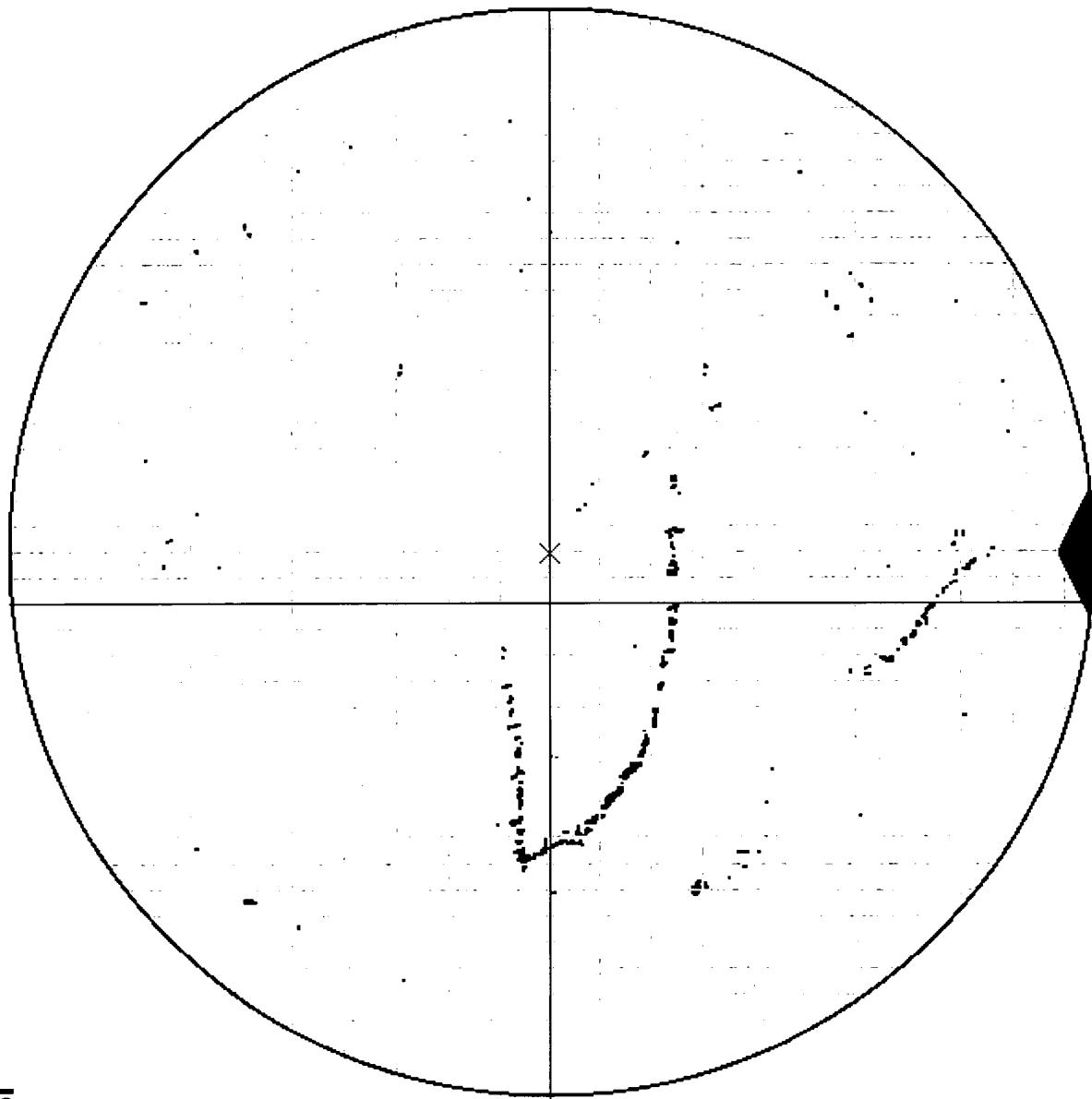


Figure 6i



007
Analyze Distributed Defects

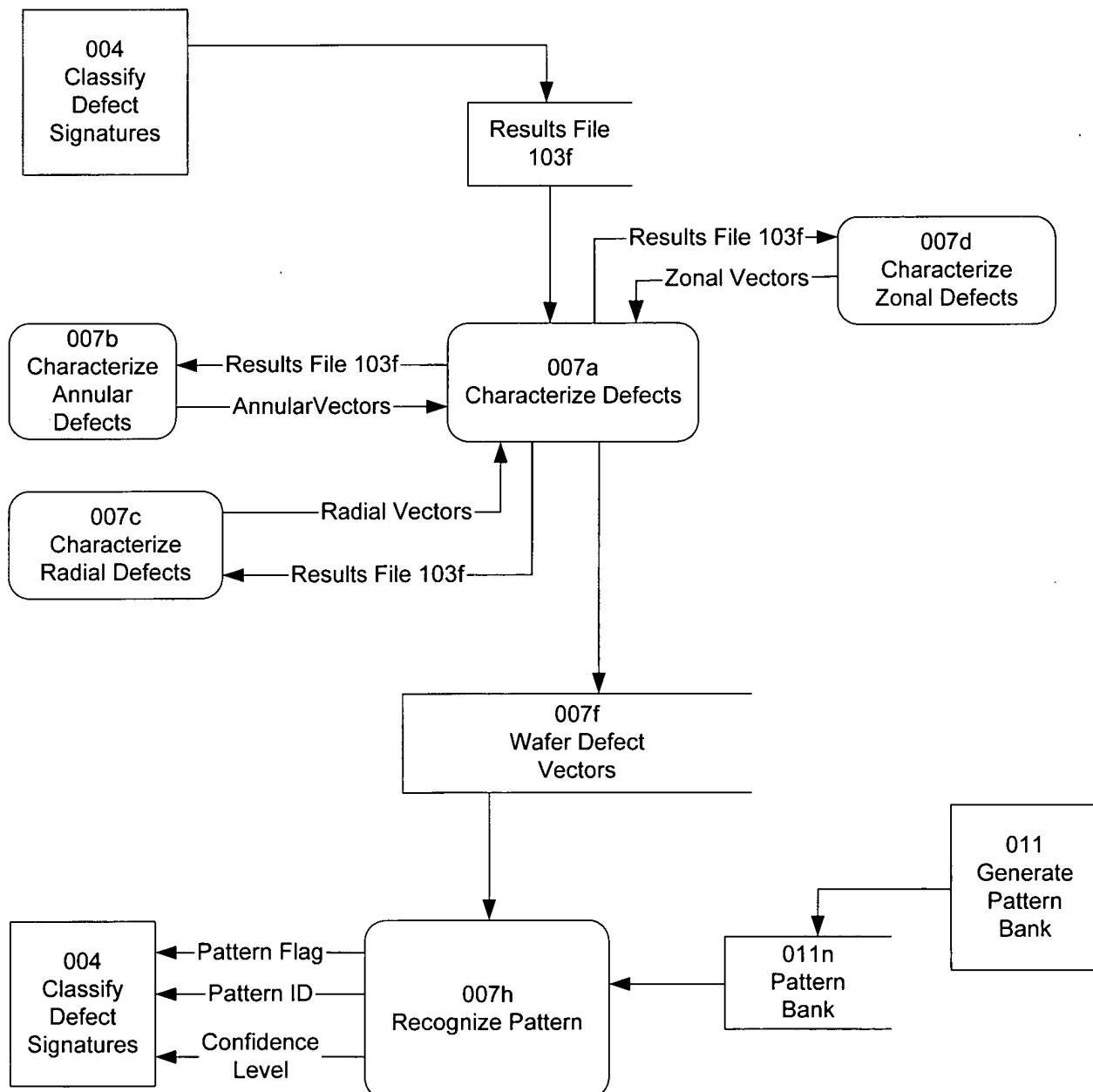
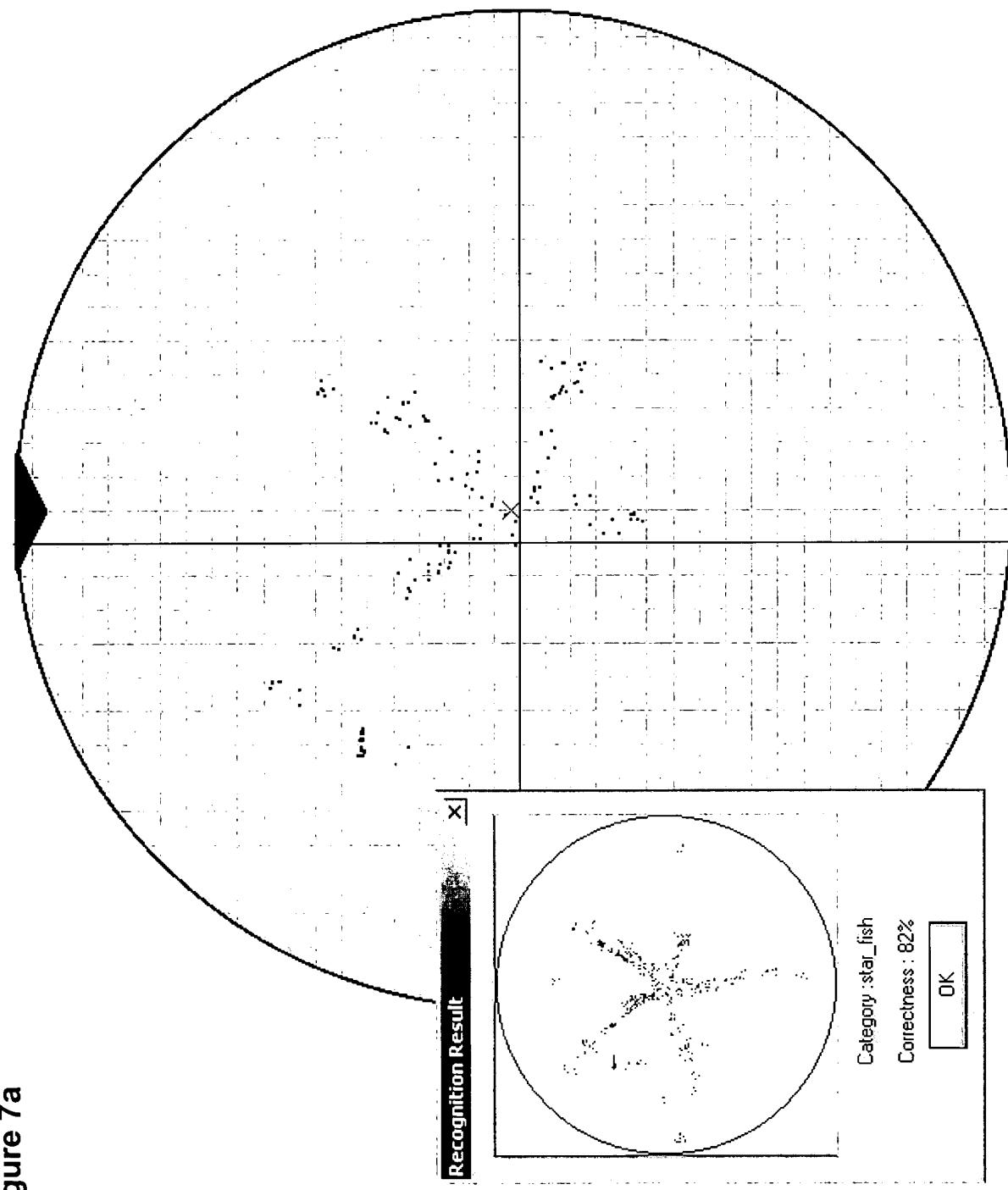


Figure 7

Figure 7a



008
Analyze Repeating Defects

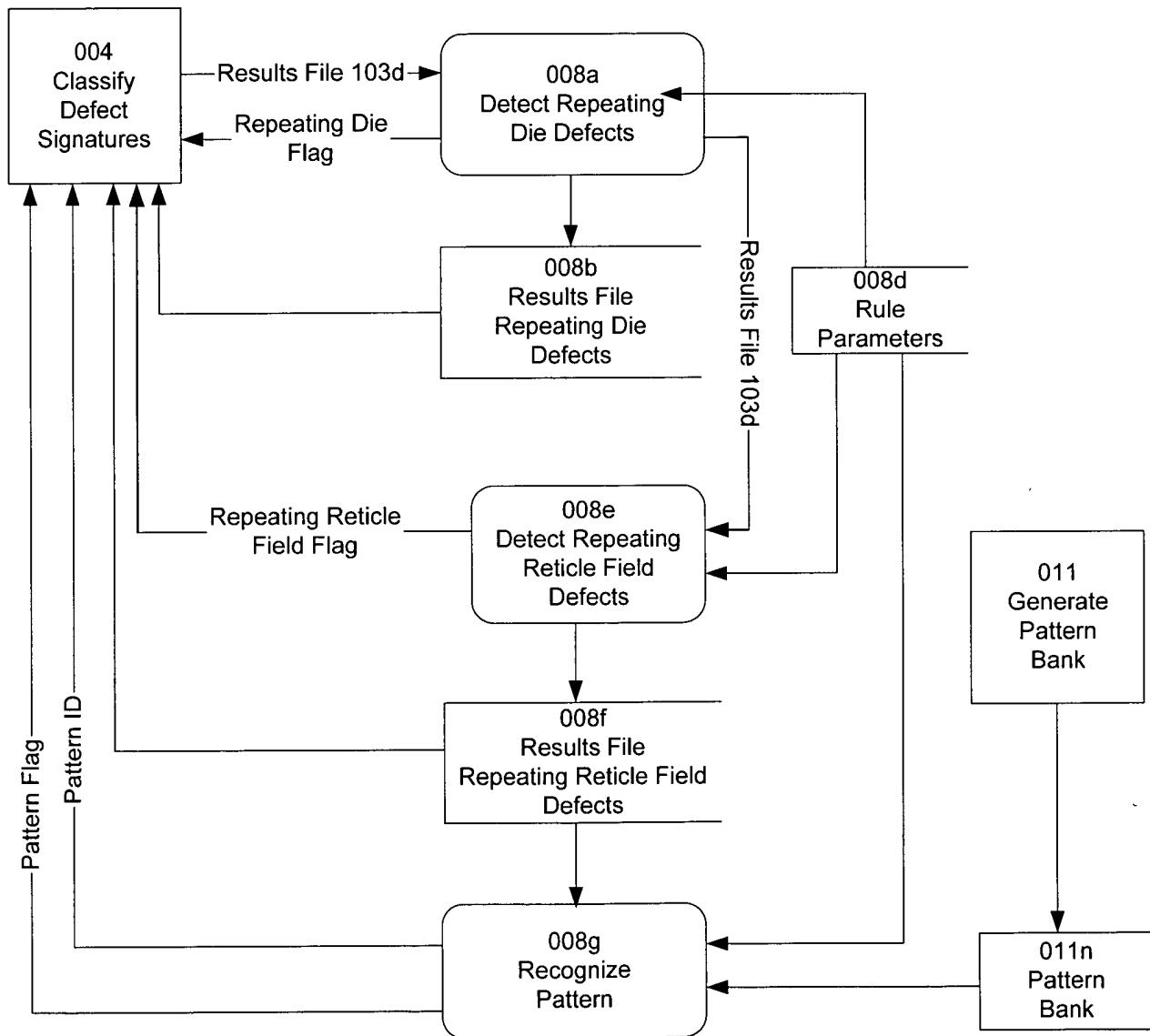


Figure 8

Figure 8a

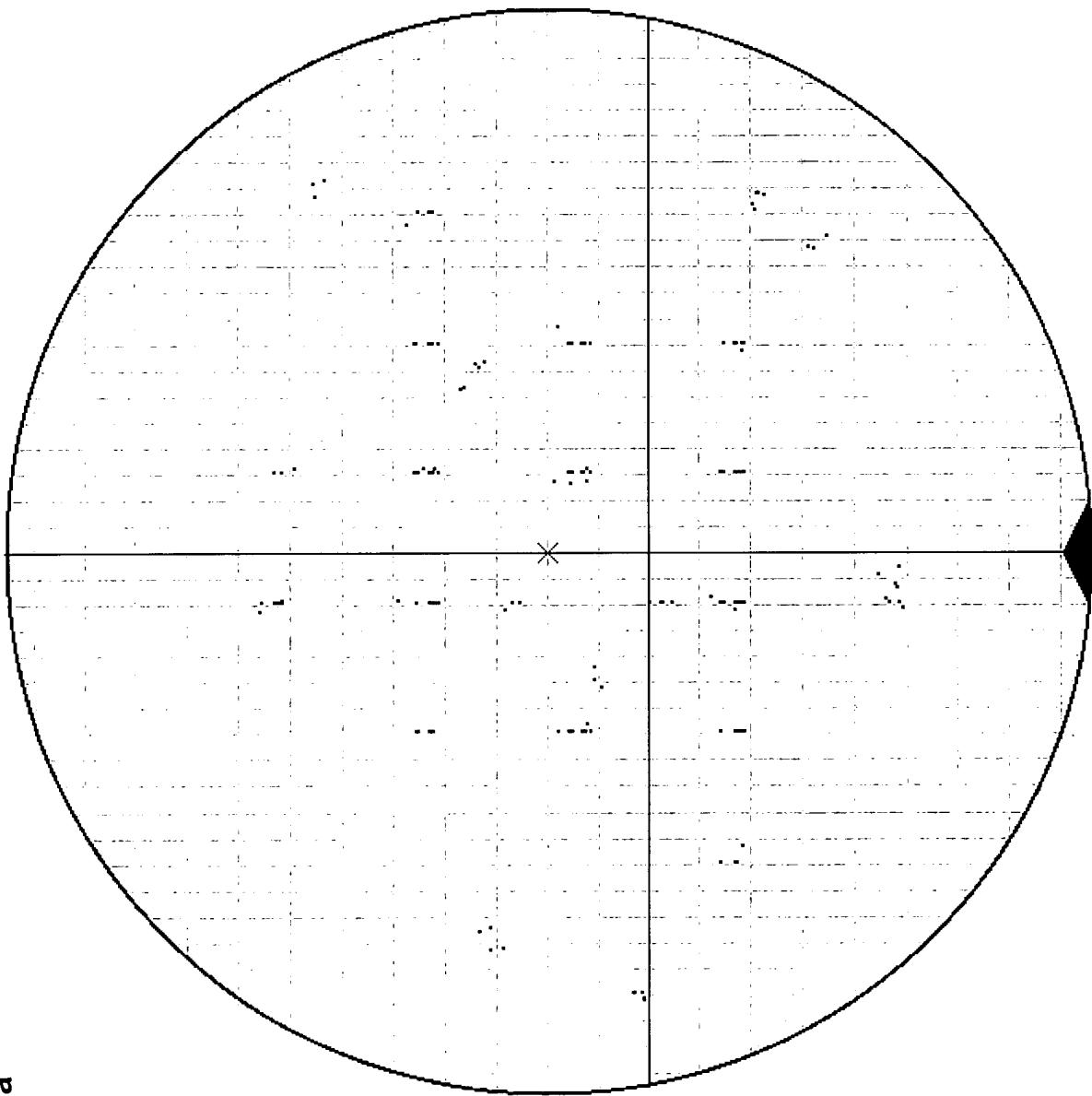


Figure 8b

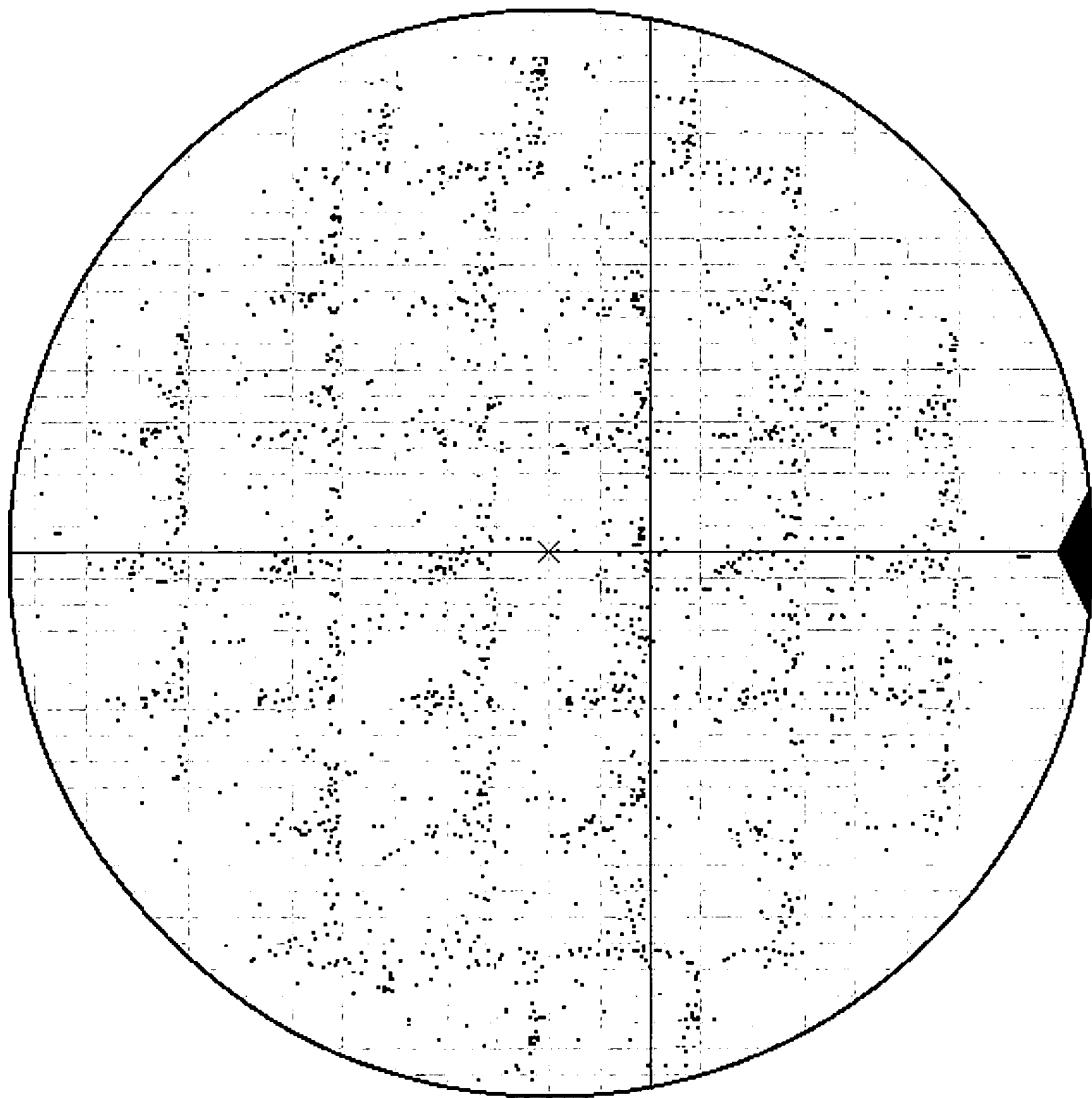
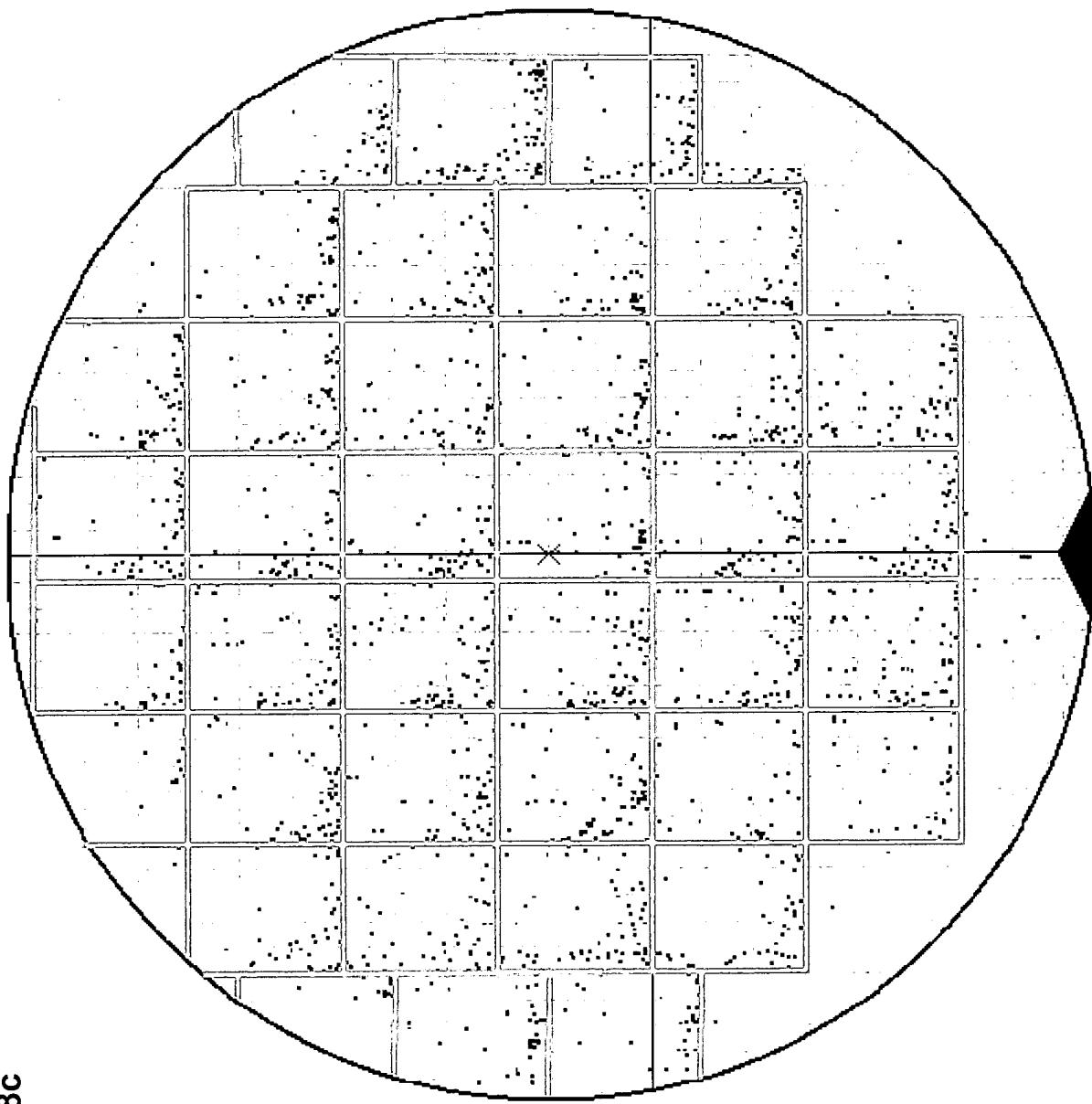


Figure 8c



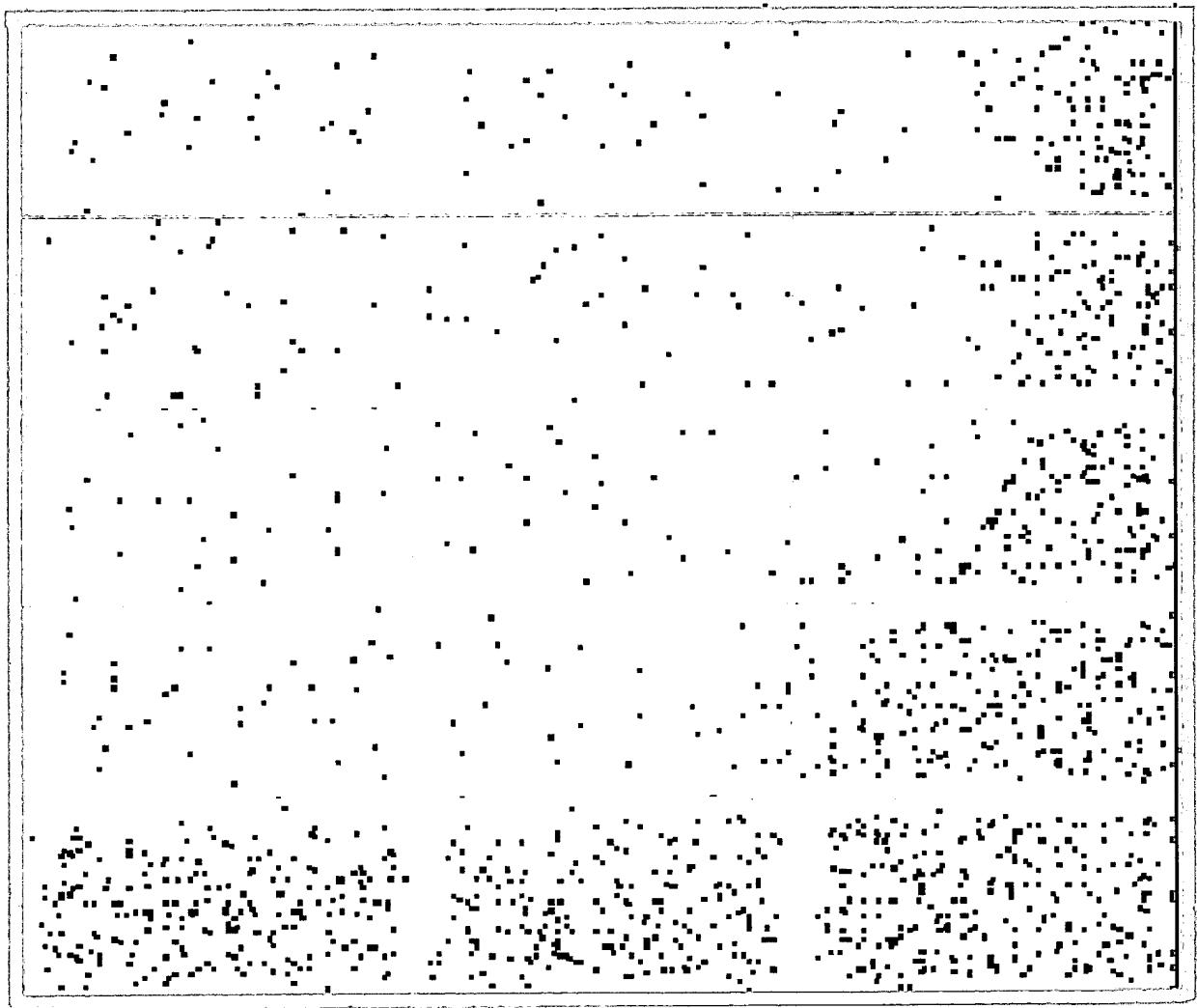


Figure 8d

**010
Intelligent Process Control**

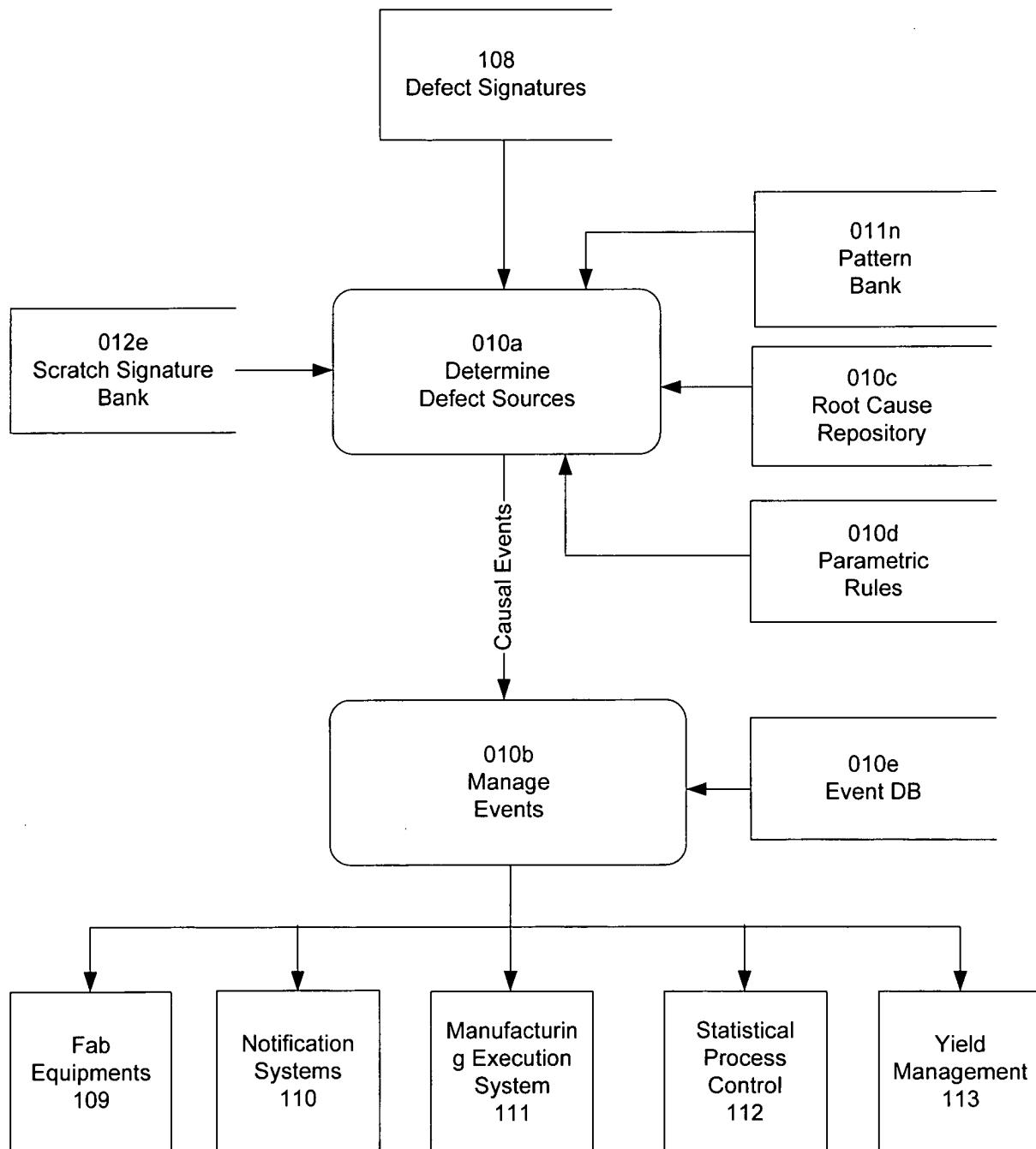


Figure 9

011
Generate Pattern Bank

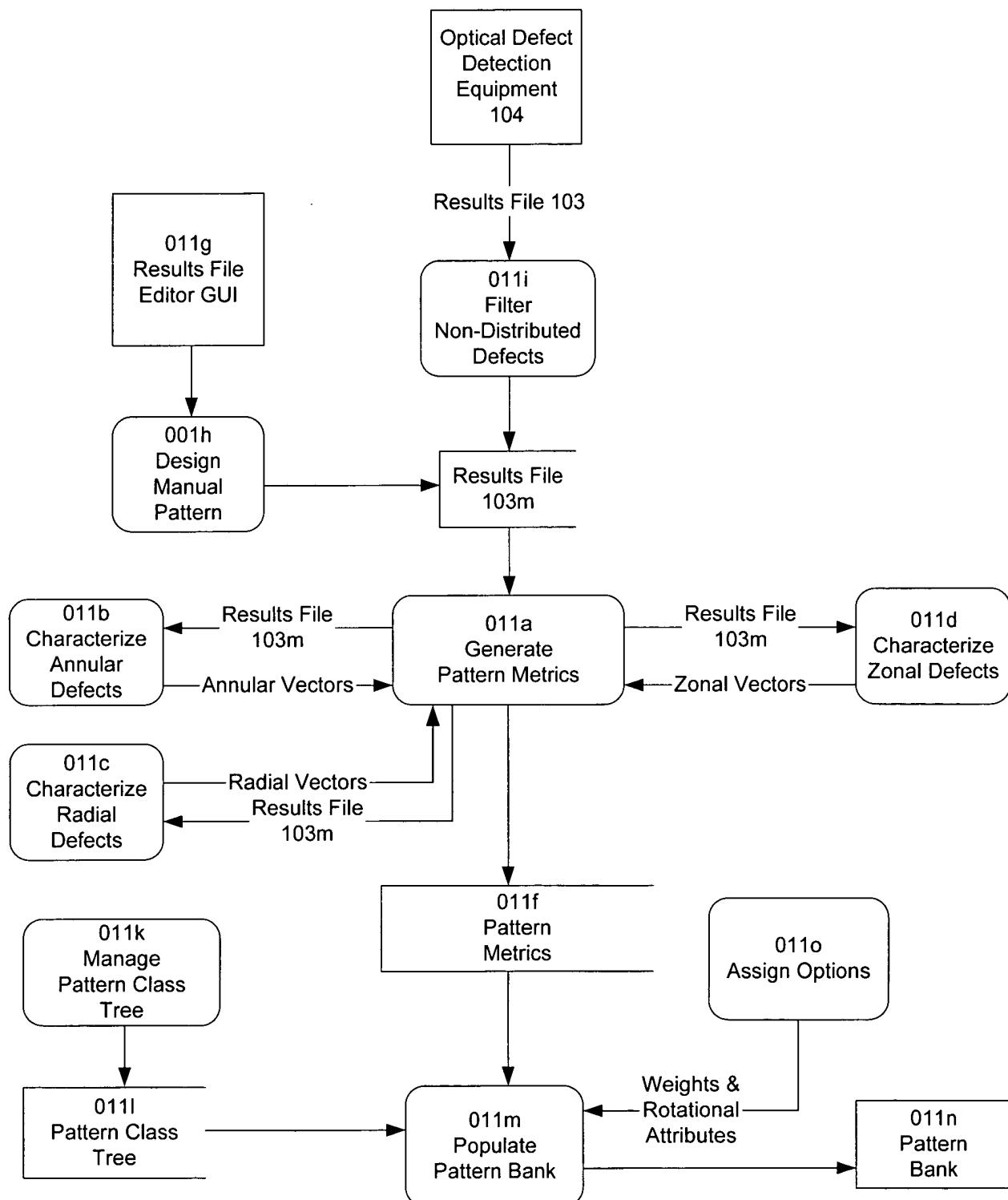


Figure 10

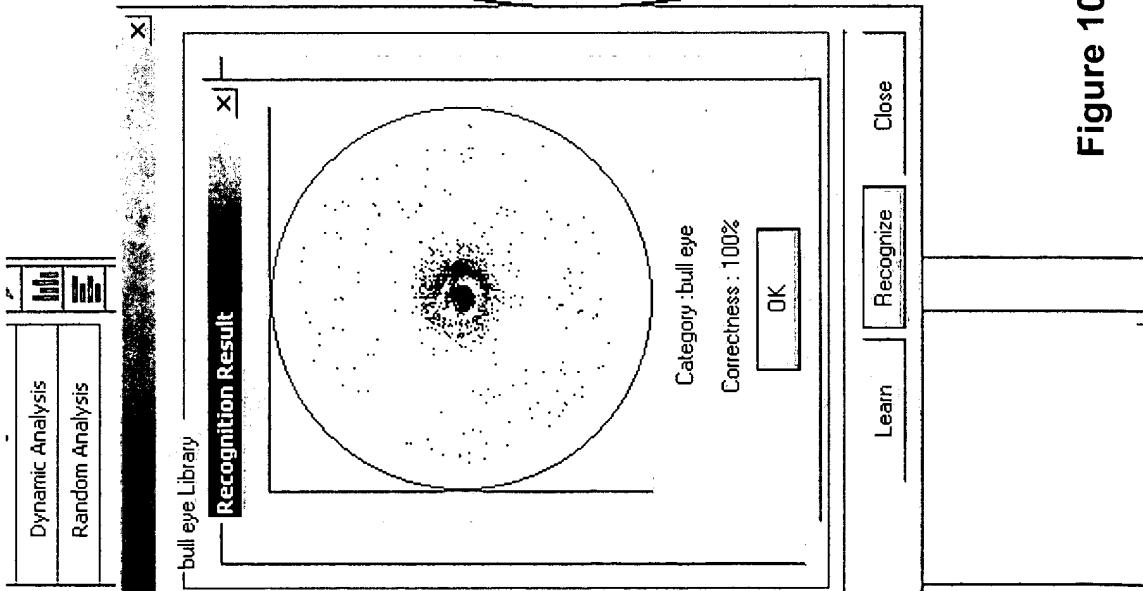
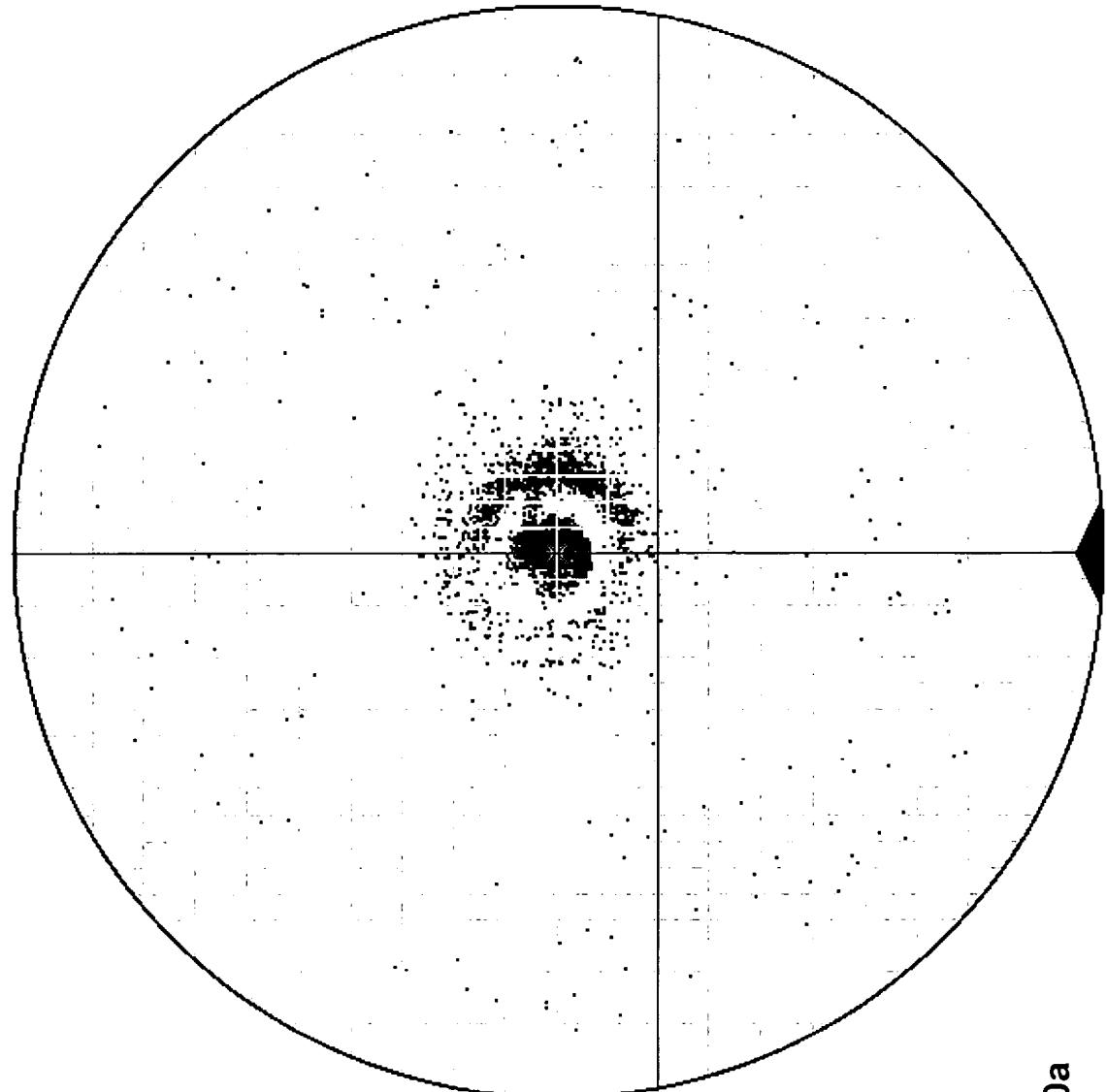


Figure 10a



012
Generate Scratch Signature Bank

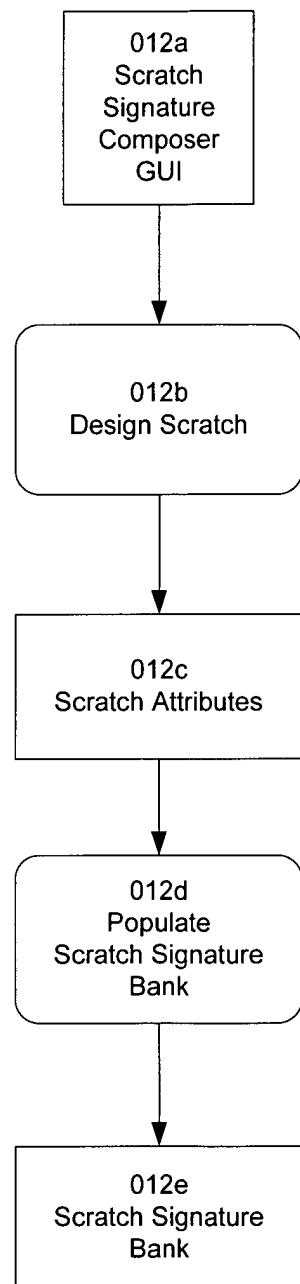


Figure 10b

Automated Defect Sourcing GUI Components

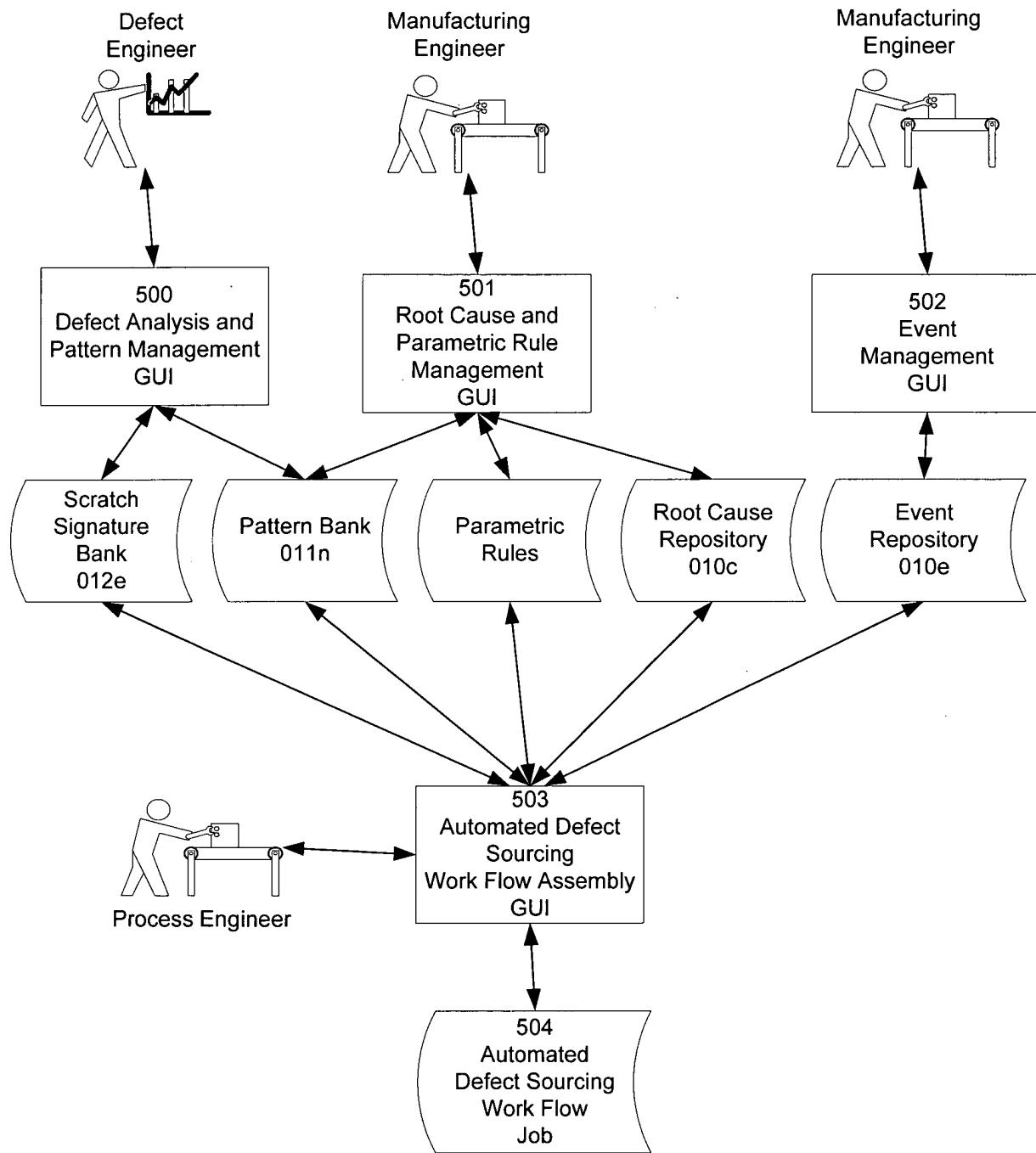


Figure 11

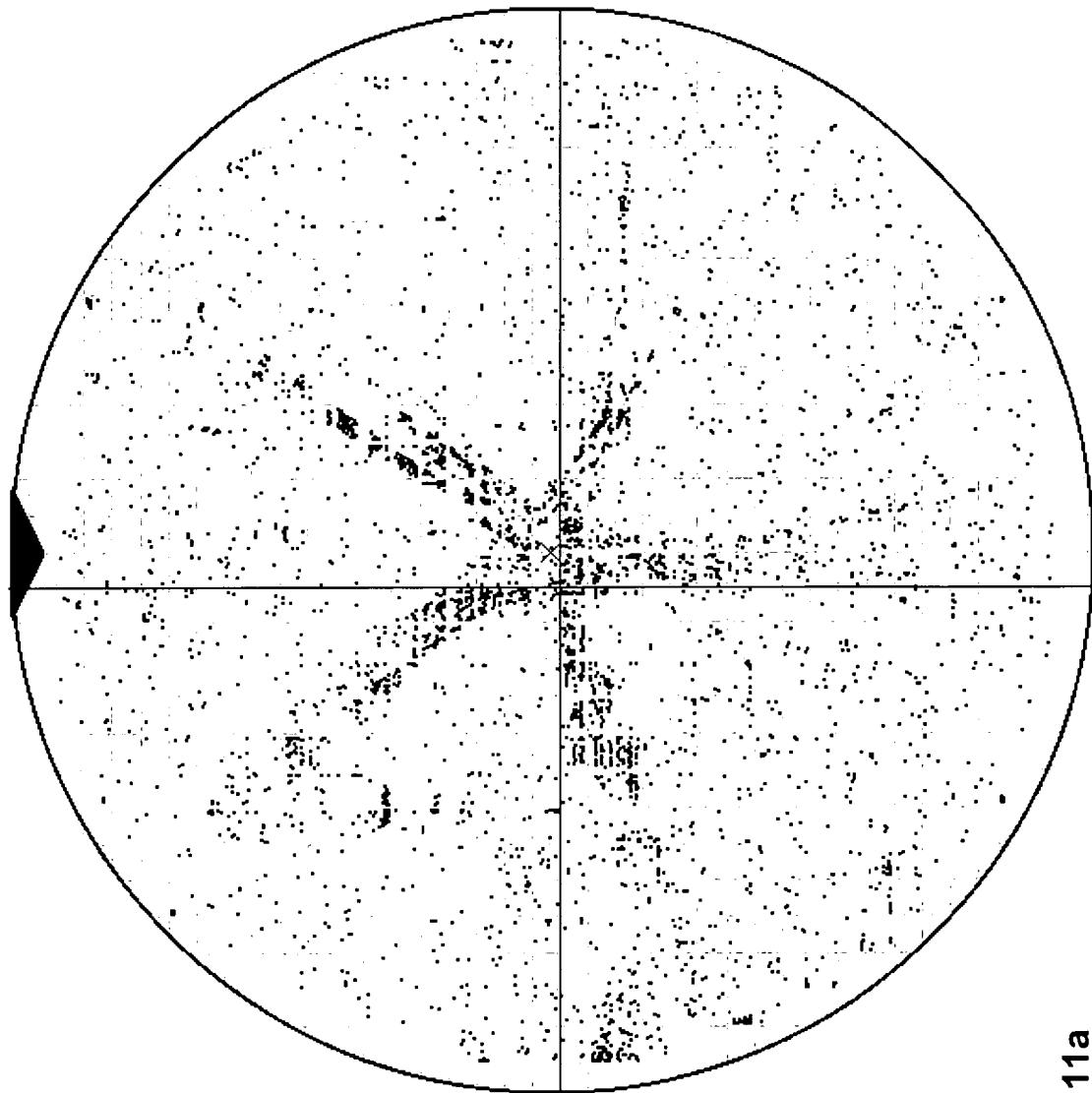
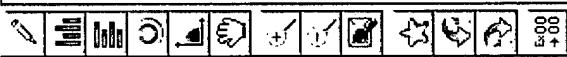


Figure 11a

Rotation Angle : 0°



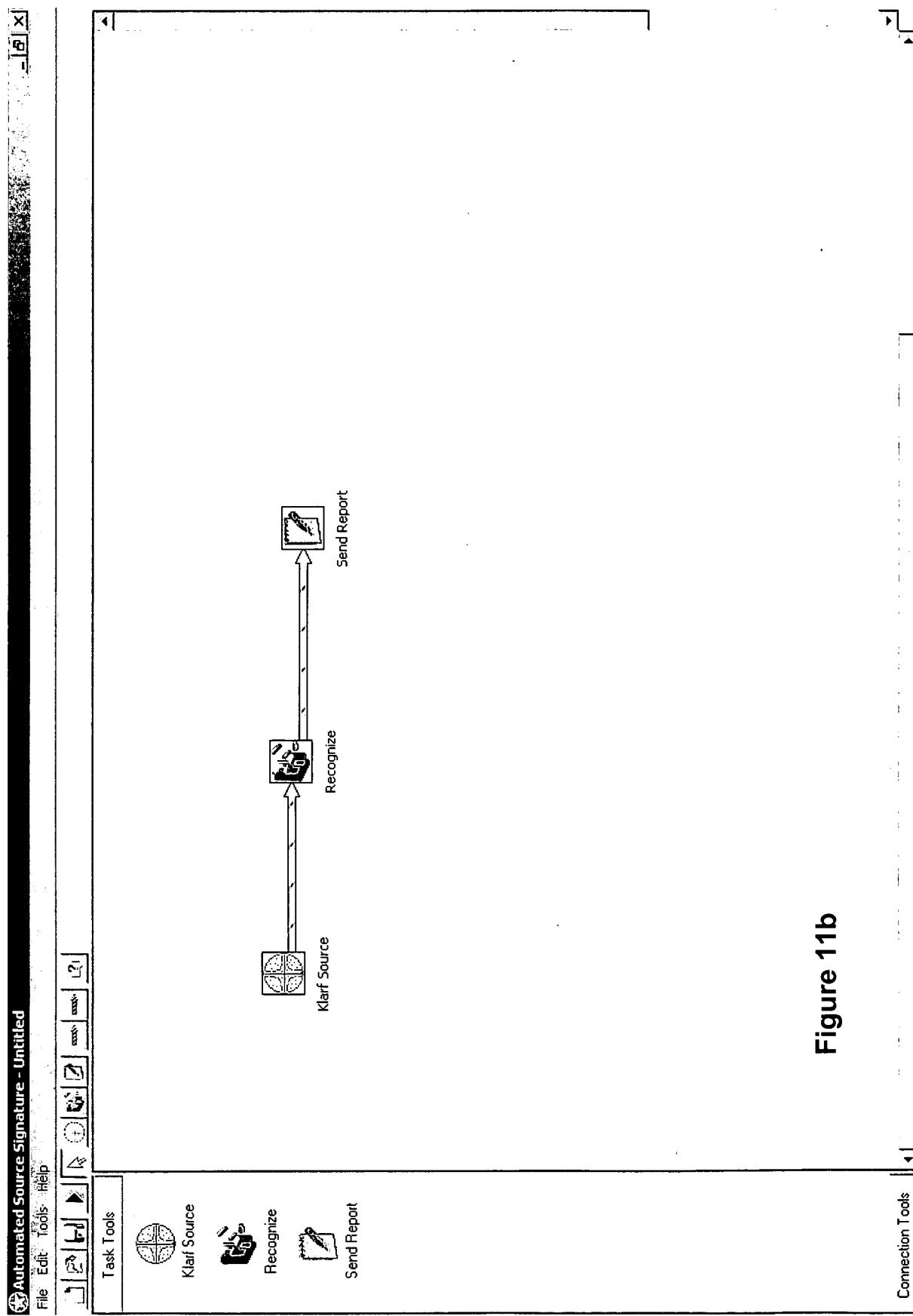


Figure 11b